

# CICE-2010

# Canada International Conference on Education

April 26-28, 2010, Toronto, Canada

## Sponsors

**(CICE-2010 was officially postponed to May 24-26, 2010)**

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## CICE-2010 Proceedings

### Edited By

Charles A. Shoniregun

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## Message from the Steering Committee Chair

Welcome to the Canada International Conference on Education (CICE-2010)! The CICE-2009 provides an opportunity for academicians and professionals from various educational fields with cross-disciplinary interests to bridge the knowledge gap, promote research esteem and the evolution of pedagogy. The CICE-2010 received 826 papers from 52 countries of which 143 papers were accepted and 9 workshops. A double blind paper evaluation method was adopted to evaluate each submission and selected papers will appear in high impact International Journals.

Many people have worked very hard to make this conference possible. I would like to thank all who have helped in making CICE-2010 a success. The Steering Committee and reviewers each deserve credit for their excellent job. I thank the authors who have contributed to CICE-2010 and our Keynote Speakers: Professor Badrul H. Khan, Professor Marie Parker-Jenkins and Professor John P. Portelli, for agreeing to participate in CICE-2010. I also like to acknowledge my appreciation to the following organisations for their sponsorship and support: Infonomics Society, Correctional Service of Canada, SAP, World Scientific, Palgrave Macmillan, and Elearningeuropa. It has been great pleasure to serve as the Steering Committee Chair for CICE-2010. The long term goal of CICE is to build a reputation and respectable conference for the international community.

On behalf of the CICE-2010 Executive members, I would like to encourage you to contribute to the future of CICE conference as authors, speakers, panellists, and volunteer conference organisers. I wish you a pleasant stay in Toronto, and please feel free to exchange ideas with other colleagues.

I will like to apologise to all our Participants for the postponement of CICE-2010 to May 24-26, 2010 due to the volcanic eruption in Iceland.



Professor Charles A. Shoniregun  
CICE-2010 Steering Committee Chair

## **Executive Committees**

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Galyna Akmayeva, Infonomics Society, Ireland

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## **Keynote Speakers**

**Professor Badrul H. Khan**

**Professor Marie Parker-Jenkins**

**Professor John P. Portelli**

## Keynote Speaker 1



Professor Badrul H. Khan, is a world-renowned speaker, author, educator and consultant in the field of ICT and e-learning. Professor Khan has the credit of first coining the phrase Web-based instruction and popularizing the concept through his 1997 best-selling Web-Based Instruction book. His Managing E-Learning book translated into 14 languages. He is the founder of McWeadon Education (a professional development institution). He previously served as the founding Director of the Educational Technology Leadership (ETL) graduate cohort program at The George Washington University, and the founding Director of the Educational Technology (ET) graduate program at the University of Texas, Brownsville. Professor Khan has served as a consultant to learning development and human resource development projects at: (a) the World Bank, (b) the US Federal Government, (c) the Asian Development Bank, and (d) various academic institutions and corporations in the U.S. and throughout the world.

**Title:** The Global Impact and Future of E-Learning

### Abstract

E-learning, with increasingly enhanced by the availability of newer emerging information and communication technologies (ICTs), is growing globally. The prevalence of e-learning practices have been far more visible in the developed nations, however, developing nations are not lagging behind. Almost all nations are increasing incorporating ICTs in their national agenda for efficiency in information and knowledge sharing in education, governance, commerce, health, agriculture, and other sectors. Bangladesh has started a new initiative called "Digital Bangladesh" to connect people to emerging technologies that enrich their lives with education for greater economic development. Similar national initiatives are either in place or under way elsewhere. Newer educational policies are being formulated in various communities worldwide to enable educational institutions to come to terms with new learning technologies. One of the emerging issues at institutions of higher learning in Africa is e-learning and the use of Information and Communication Technology (ICT) tools to deliver educational resources. In this presentation, *A Global Framework for E-Learning* will be introduced to discuss the utilization of e-learning methods and their implications for higher education from the perspectives of institutional, pedagogical, technological, ethical, interface design, evaluation, management, and resource support issues.

## Keynote Speaker 2



Marie Parker-Jenkins is Professor of Education in the Department of Education and Professional Studies, University of Limerick, researching issues of social justice with particular reference to “race” and ethnicity. Before having an academic career in the UK, she taught in Bermuda, Canada and Australia where she obtained practical knowledge of children from culturally diverse backgrounds. She is the author of over 100 publications including books, reports and journal articles. Her research has included study of the expansion of religious schools, particularly those based on an Islamic and Jewish ethos; and in her consultancy capacity, she has provided workshops on such subjects as citizenship, community and identity.

**Title:** Aiming High: Raising the Attainment and Aspiration of Pupils from Culturally Diverse Backgrounds

### Abstract

“All children and young people should be able to achieve their potential, whatever their ethnic and cultural background and whichever school they attend” (Department for Education and Science, UK (2003).

In the national and political context in Britain and elsewhere, raising the attainment of culturally diverse pupils continues to be an area of importance, particularly as academic under-performance leads to disenfranchisement in society. This keynote presentation is set within the context of the UK government concern over the under-achievement of minority ethnic groups, particularly those from Black Caribbean, Black African, Pakistani and Bangladeshi backgrounds (Pupil Level Annual Schools Census, DfES 2006). Statistics have confirmed that these groups of students have experienced lower levels of attainment than other ethnic groups across all key stages of education for 5-16 years olds.

Concern over the experience and underachievement of minority groups in the UK is not new and indeed has been documented over the last decades (Coard 1971, Troyna 1986, Gaine 1987, Gillborn 1996). More recently, the focus has been on the positioning of “Black boys” (Sewell 2007), and indeed boys in general have emerged high on the political agenda because of their consistent under-achievement (DfES 2006, TES 2007). Fresh impetus within race equality work, and the UK government’s “respect” initiative carries with it an expectation that schools will demonstrate an understanding of and sensitivity to cultural diversity in the classroom ([www.respect.gov.uk](http://www.respect.gov.uk) 2006).

Drawing on my empirical research of schools in the UK (Parker-Jenkins et al 2007), and more recently research in the Republic of Ireland (Parker-Jenkins and Masterson 2010), I explore some of the key issues in underachievement among culturally diverse groups and highlight implications for policy and practice in Europe and elsewhere.



## Keynote Speaker 3



John P. Portelli is Professor, Co-Director of the Centre for Leadership and Diversity, and Associate Chair of the Department of Theory and Policy Studies at OISE, University of Toronto. His research and teaching focus on: issues of democratic theory and educational policy, leadership and pedagogy; student engagement and the curriculum of life; standardization, equity and "students at risk"; analysis and critique of neo-liberalism in education. He has published eight books (including two collections of poetry). He has been involved in three major national projects: Student Engagement in School Life and Learning (1996-1999), Toward an Equitable Education: Poverty, Diversity and 'Students at Risk' (2004-2007), and Pedagogies at Risk: Just Schooling and Accountability Discourses (2005-2009). In 2005 he received the Canadian Society for the Study of Education Mentorship Award. Three of his books won the American Educational Studies Association Critic Award, and another of his books won the Canadian Association for the Foundations of Education Book Award. His latest book, co-authored with Rosemary Campbell Stephens, is entitled *Leading for Equity* (2009).

**Title:** The challenges and possibilities of diversity and equity in education: Toward a Curriculum of Life

### **Abstract**

Based on 3 Canadian national studies (student engagement in school life and learning; equitable education: poverty, diversity and students at risk; doing social justice education during times of accountability), this presentation will identify the challenges that the neoliberal agenda in education creates for serious equity work in education. It will identify several popular yet dangerous neoliberal myths and tendencies, including the culture of the deficit mentality. In contrast, the presentation offers the concept and practice of a curriculum of life which is consistent with a democratic perspective.

## **Workshops**

## **Workshop 1: Including Every Child: Getting Every Child to Access the Curriculum at Grade Level**

The overall goal of The Henderson Inclusion Elementary School is to help ALL students learn and succeed. This session will outline the learning experiences that support students' academic and social / emotional needs.

The scope of this workshop will include the basic definitions and value of co-teaching, how to prepare for and structure this collaborative model of instruction, and it will highlight the challenges and benefits of the co-teaching model especially with regard to full inclusion environments. The organisers will share their experience in transforming the public elementary district school to a successful national model of full inclusion.

### **Organisers**

Terri Wellner, Darlene Jones Inge

## **Workshop 2: Tic Tac Toe Math: An Alternative Techniques for Individuals Who have Learning Disabilities**

The Tic Tac Toe Math was created by the presenter and has been successfully used by adults and children for more than 20 years. This workshop will provide participants with:

- A rationale for using alternative instructional techniques with individuals who have learning disabilities.
- A description and demonstration of Tic Tac Toe Math\* for completing multiplication, division, fraction and percentage problems.
- A discussion of the pros and cons of using such alternative techniques.

The technique uses the familiar Tic Tac Toe pattern to substitute for rote memory of the times tables.

### **Organisers**

Richard Cooper, Carole Champlin

### **Workshop 3: Transforming Schools for Lasting Change: Creating common, sustainable Action Plans that work**

This active session will introduce teachers, administrators, community members, students and parents to this proven method of educational planning that engages all stakeholders and leads to success. While many organizations spend 80% of their energy on the 20% of things about which they disagree, Future Search (FS) helps groups focus on commonly shared values and visions, while building unified commitment to action. Through simulation, learn what it looks like to bring together the stakeholders needed to visualize and actualize a stronger school or school district. FS is not the answer; it is the methodology that will help your school or district create a shared, realistic and successful future.

#### **Organiser**

Ruth Feldman

## **Workshop 4: Writing a Research Paper and PhD Thesis**

The idea of writing a research paper or developing a topic of research interest that can lead to a PhD proposal is always an endless thinking of where, when, why, what and who. Therefore, becoming an experienced researcher and writer in any field or discipline takes a great deal of practice.

This workshop provides solutions in response to the lack of competence demonstrated by young researchers and PhD students, and the understanding of what contributes to knowledge gap.

### **Organiser**

Charles A. Shoniregun

## **Workshop 5: Underdeveloped and Ambiguous Vocabulary: Current Research Project about the Communication Problems of Adults with Learning Disabilities**

This workshop will explore a new research project that the presenters have begun with students who have language-based learning disabilities. The project is based on anecdotal evidences of the difficulties such clients experienced in therapy or counseling sessions.

The research tests the hypothesis that language-based learning disabilities (underdeveloped vocabulary – especially understanding abstract concepts) interfere with the therapeutic process. Because these clients are self-conscious about their limited vocabulary, they rarely ask therapists for clarification of terms. Thus, the clients may proceed with very confused or erroneous understanding of common therapeutic words or phrases (identity, working through, process, association), while the therapist or counselor is completely unaware of the client's predicament.

### **Organisers**

Richard Cooper, Carole Champlin

## **Workshop 6: Enhancing Your Mentoring Skills: Applying Adaptive Mentorship**

Adaptive Mentorship (AM) is a mentoring model applicable across all professions/occupations; and it has been developed, refined, and researched by the authors during the past several years, for the purpose of enhancing the mentoring/coaching/supervising process within all educational/training settings. Adaptive Mentorship has been recognized as a clear conceptual and practical framework that has proven effective in guiding leaders' mentorship practice.

The creators of the AM model have recently received support from the Social Sciences and Humanities Research Council of Canada to promote and disseminate this model more widely, because it is believed that it has potential to enhance all mentorship practice wherever it is implemented across the learning spectrum.

### **Organisers**

Edwin G. Ralph



## **Workshop 7: 10 Concrete Classroom Activities that Aim at Long-term Learning**

The workshop consists of ten classroom activities briefly presented and followed with guided discussion to encourage participants to explore elements which increase the possibility of long-term learning. The specific examples provided in the session act as a kick-off point for reflection: 'What am I doing that works?' 'How can I modify these ideas to suit my learning scenarios?' 'What are the factors that make learning stick, and how can I build them into the package I offer my students?' Multi-media clips, short paper and pencil exercises, 'beehive' sessions and handouts provide information about the activities discussed.

### **Organisers**

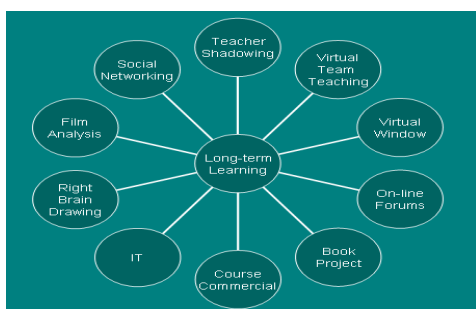
Sharon Coyle, Sophie Jacmin, Caroline Chwojka

# Ten Classroom Activities that Aim at Long-term Learning

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## Abstract

*This workshop, chosen by the AQPC (Association québécoise de pédagogie collégiale) for a 3000\$ bursary towards presentation at an international conference, looks at specific learning activities in a teacher driven exploration of what kinds of classroom scenarios encourage learning that lasts.*



## 1. Introduction

If we can't force a student to read a book for Tuesday, can we give him the will to still be reading years after graduation? We want students to acquire skills and attitudes that will make them long-term learners and thinkers. What kind of classroom scenarios are we striving for? Can new technologies furnish us with tools to help make learning stick?

Ten activities and the pedagogical ideas behind them will follow, but first, let's define long-term learning. There are two ways of looking at this; read what the experts are saying (You will have to look at someone else's article for the answer to this!) or we can explore our own impressions from experience. We all know the feeling we get when a classroom activity works. Let's reflect on why...

## 2. When do we definitely *not* see long term learning occurring?

What kind of learning slips in and out of students' consciousness like a fish in a fast-moving stream? Possible answers include cramming for tests, memorizing without understanding, large quantities of information learned without connections to anything in the student's reality, or learning acquired in social isolation.

## 3. When do we see evidence of long term learning happening?

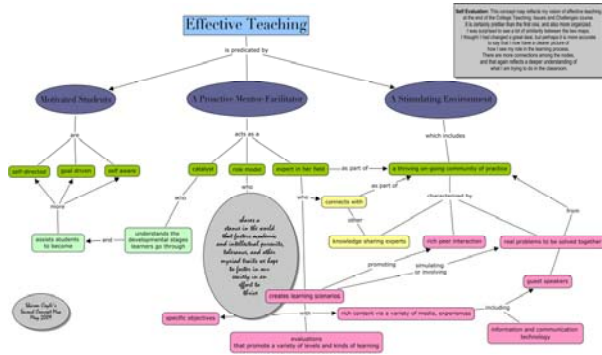
Our "learning footprint," *unlike* our carbon footprint, should be big, and last a long time. What do we know from our own experience in and out of the classroom about learning that lasts? Possible answers include learning that is reinforced, or learned in a social context. It also includes learning in which we are an active participant, where we are responsible for own learning. Long term learning seems to hinge on our attitude, our preparedness, and our own fields of interests –learning that connects up with what we already have stored in our synapses seems to stick with us. I can give the example of poems I still have in my head from grade school, or Shakespearian passages from high school that still roll off my tongue –and guess who teaches literature? But please don't ask me to state the Periodic Table! One of our workshop participants was able to sing Latin pronouns to the tune of Jingle Bells. Another cited a frog dissection that led to a career in anatomy. Many of these examples include inspiring teachers as well as specific learning conditions and activities.

## 4. What is your idea of effective teaching?

If we can recreate some of these elements in our learning scenarios we can contribute to the longevity of our students' learning. The following ten activities come out of our teaching and seem to support long

term learning judging by student feedback and teachers' impressions.

Try this exercise (taken from the Performa Master Teachers course "College Teaching: Issues and Challenges): Make a concept map of your vision of effective teaching. Try the same exercise after a period of time and see if your ideas have changed.



Our workshop, Ten Concrete Classroom Activities that Aim at Long-Term Learning, stemmed from a desire to build an interactive learning session based on college practitioners' experience of what 'worked' in their classrooms. We wanted to 'walk the talk' and include interactive reflective participation that encouraged the folks sitting in the rows of chairs to be part of the event in the same way we attempt to engage our Cegep students. We built in multi-media clips (four short videos –a few minutes each- a PowerPoint to guide the full session that framed the ten activities with an introduction and a conclusion, and two supplementary PowerPoints that illustrated individual activities), two short paper and pencil exercises given as handouts to the participants, and three 'beehive' sessions (two minutes for participants to discuss a specific topic with the person beside them), as well as several documents that were given as handouts to provide more information about specific activities for those who were interested.

It is wonderful to watch group dynamics evolve over the course of an hour. From the 'try-to-impress-me' crossed arms and hooded eyes beginning to the 'is-she-really-going-to-make-me-talk-to-this-person-beside-me-who-I-don't-even-know' dismay, to the "I-don't-want-to-stop-talking-yet-because-my-neighbour-is-so-interesting-I-haven't-even-said-my-part-yet" enthusiasm, to engaged questions and finally an uninhibited swarm of enthusiasm at the front of the room when the session comes to a close. Professionals from the University of Alberta, Vanier College, and Cegep de Limoilou expressed interest in sharing this workshop with their teachers. Séverine Parent, Conseiller Pédagogique at the Cegep de Limoilou posted her positive opinion about our workshop on her

blog and included links to the AQPC site in her enthusiasm to share these ideas with the teaching staff at her college. (<http://tic.limoilou.qc.ca/blogue/?p=99>)

Ten Concrete Classroom Activities that Aim at Long-Term Learning is a workshop that gets our creative juices flowing. The specific examples provided in the session act as a kick-off point for reflection: 'What am I doing that works?' 'How can I modify these ideas to suit my learning scenarios?' 'What are the factors that make learning stick, and how can I build them into the package I offer my students?' The following paragraphs outline the ten activities. It is important to note that each classroom activity was briefly presented and then guided discussion encouraged participants to explore the elements that increased the possibility of long-term learning. Workshop animators and participants suggested elements such as: novelty, use of technology, social interaction, creativity, targeting multiple learning styles (auditory, kinaesthetic, visual), teacher enthusiasm, motivation, community involvement, humour, role modeling, and organization as possible factors that might influence increased long-term learning.

#### 4.1. Activity #1 Teacher Shadowing

Open up a dialogue about teaching and learning with your peers in an effort to continually improve your pedagogy. Try "Teacher Shadowing," an exercise required as part of the Master Teaching and the College Level program run by Performa out of the University of Sherbrooke. Use a series of questions to guide your observation and visit another teacher's classroom to observe their interaction with their class and subject matter. The following couple of paragraphs and the interview that follows can give you some ideas for the kinds of things you can look at.

For my teacher shadowing I asked one of the "top" teachers (so described by fellow colleagues and former students) at the Cegep de Sept-Iles, Suzanne Banville if I could sit in on one of her classes. I have been hearing great things about this teacher for years from adult friends who remember her classes with enthusiasm. She uses lots of IT in her classes (concept maps, on-line exams), and recently finished her certificate in the Master Teachers Program with Performa. Picture twenty second-year science students in an optional biology course on a blustery March morning with the cold wind howling outside the windows. The class is already set up; the life-sized hips and torso of a human stripped of her frontal skin and muscle layers set us up for the discussion of digestive systems. Two series of plastic models of stem cells and human embryos sit waiting to be discovered. Hand-outs have been distributed, the chalked list on the board gives the

agenda for the morning, and the computer connected to the projector is humming ready to go.

Suzanne Banville's biology class offers students a quality learning experience on many levels. Expert knowledge and modelling of scientific enquiry and interest from their lively teacher, a variety of materials to appeal to many different learning styles, hands on learning activities that allow students to take responsibility for their understanding, and a variety of working situations: individual (verbalizing the steps), in pairs (confirming, sharing or questioning) and mentoring (with the teacher or the technician). Once students finish their experiments, they move on to help others and reach greater levels of understanding themselves. There is lots of quiet, productive, on task talk. Humour and laughter add to the social nature of the learning. This is a class that the students enjoy attending and get their money's worth from. This is the kind of course they will be telling their friends about years from now.

#### **4.2. Activity #2 Virtual Team Teaching**

This wonderful experience provides peer interaction: for students and teachers. What is Virtual Team Teaching? It entails two or more instructors involved in the same course using information technology tools as their mode of communication; if possible, at least one in-person meeting of some of the participants contributes to the success of the project. We have been doing this for the past three years between classes at Vanier College in Montreal and classes at the Cegep de Sept-Iles. Why is virtual team teaching good for students? The experience leads to enhancement of classroom learning conditions, improved motivation, and higher level of engagement with the material, social interaction modeled by teachers, opportunity for social interaction with peers.

#### **4.3. Activity #3 The Virtual Window**

This tool uses internet communications systems to create a window into another city, another classroom. This is a fascinating opportunity for exchanges about cultural differences between urban and rural students or to share what they all have in common.

#### **4.4. Activity #4 On-line Discussion Groups**

This is something many teachers are using. Find someone in your college who has some experience with this and get started. Our advice would be to focus on personal experience and exchanges of ideas to begin with as we have found that this medium works better

with the more personal aspects of learning as opposed to heavy theoretical content.

#### **4.5. Activity #5 Course Commercial**

This is a simple case of changing the media your students are working in. The novelty factor can not be underestimated! Do not feel limited by your own computer abilities –your students will rise to the occasion. Use classroom experts. Most computers have Windows Moviemaker as part of their basic tools and students are often familiar with the program. We had one learning activity during the term, and then used the “Course Commercial” as part of the final assessment. Students conceived and created a commercial for their Humanities Knowledge class (the assignment asked them to make a commercial for the course aimed at helping high school students understand what it was and why it was important) and they completed it during a one-hour lab session.

#### **4.6. Activity #6 Children's Book Project**

This activity provides students an opportunity to create an artefact for a real audience. Students enjoy the satisfaction of doing something real; they write a children's story as part of our study of children's literature, and they produce an illustrated copy which they bring on a class outing to the local English elementary school and read aloud to a live classroom audience! This works of a variety of levels, it provides outreach into the community, the Cegep students become role models of “cool” readers and writers for the elementary school students, and the college students are also perceived as “stars” by the younger students and this does wonders for their egos!

#### **4.7. Activity #7 IT**

Use technology! If we listen to those who are tracking these shifts we may be able to gain some insight into what we should be doing now to prepare ourselves and our students to be a part of this future. Here is what they are saying. 1. The traditional model of the teacher as holder and dispenser of knowledge is no longer tenable. 2. Information now moves in a lateral pattern through a variety of connections. 3. “Millennial learners, due to their digital lifestyles (Dede, 2005), have expectations of education as a participative, engaging, and active environment.” (Seimens, 6) So basically teaching has changed, knowledge management has changed, and learners have changed.

Canadian educator George Siemens states that “our [traditional] educational process says that we know what a student will need to know” -and that this is a complex [and unlikely] view of the world [3]. An interesting alternative educational outlook is “participatory pedagogy” -one where we make a tentative contract with students and engage in co-creating the formation of the content with the students. (Schwier interview) So this means our classrooms need to shift their focus from content driven and teacher centered to communities of practice that encourage learner-teacher-community sharing and mentoring in problem driven apprenticeship style scenarios that promote an on-going learner models and foster open-minded, self-driven enquiry [2].

In an on-line interview, Seimen’s advice to educators is to encourage students in their: capacity for openness, ability to externalize themselves, capacity to communicate with others, the social dimension of communication, and to think that active learning is a formation of a connection, and that learning is not just learning something once. Students need to look for diversity to avoid simply reaffirming their own version of what is correct, and they need to appreciate appropriate information sources. Teachers, when dealing with complexity and flux, need to create an adaptive process for students that enables them to stay current when they leave the classroom; they need to foster activities that encourage critical thinking, deep thinking, and understanding. Teachers need to have students work with concept maps to show how information is interconnected, they also need to bring in experts and use resources that are created by others. Teachers need to model the ripple effect of staying connected to learning sources to encourage lifelong learning behaviours in their students. (Schwier interview)

#### **4.8. Activity #8 Drawing in Your Right Mind**

This activity from Betty Edwards’ book *Drawing on the Right Side of the Brain* provoke students into moving away from our society’s focus on traditional, rational, linear thinking to work on divergent, intuitive ways of seeing the world [1]. The simplest exercise is to turn a chair upside down on a desk and ask them to draw it. They are amazed at how well they draw because their logical “left” brain can’t recognise the parts of the chair when presented this way and allows the right brain to kick in and do something it does well, evaluate and record spatial relationships.

#### **4.9. Activity #9 Film Analysis**

Films provide a wonderful opportunity for shared experience, and there are many examples of movies that can deepen our students’ understanding of a concept. Guided viewings work well, before you view the film, hand out a list of questions to be answered. You can use on-line discussion groups or perhaps a Windows Moviemaker assignment to evaluate the learning.

#### **4.10. Activity #10 Social Networking**

This is such a new possibility that we are hardly even sure what to do with it. There seems to be incredible potential for building those on-going communities of practice that the future is calling for. We tried it as a simple Facebook group for students from two geographically distant Quebec colleges who participated in a field trip to Tadoussac as part of our Virtual Team Teaching Project to share photos and comments. Within less than 24 hours of creating the group there were over three hundred photos and 99% of the trip’s participants had joined. Students were tagging their photos and sharing comments. This would obviously need to be monitored and supported, but the possibilities seem endless.

### **5. Conclusion**

This workshop began with the theme of long-term learning and the idea and broadened to explore what we were doing that worked and thinking about how we could share these experiences with others. Collaboration in itself is an enriching experience. We are social beings struggling to survive in an evermore individualist world. Talk to your students. And listen to them. -Same thing with you colleagues. Even the experts agree that this is the place to begin. We hope that at least one of these ten activities that aim at long-term learning will be the germ of an idea that will grow in your mind to become yet another long term learning experience.

### **6. References**

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- [2] Schwier, R. (Producer). (2008). *Seimen’s interview on connectivism*. <http://omegageek.net/tricksafe/?p=1193>. Access date: 3 May, 2009.

- [3] Siemens, G. (2008, January 27) Learning and knowing in networks: changing roles for educators and designers. *ITFORUM*. <http://it.coe.uga.edu/itforum/Paper105/Siemens.pdf>. Access date: 1 May, 2009.

## **Workshop 8: The Impact of the Corporal Dimension on Teaching**

Corporal expressions determine pedagogical situations to a vast extent and influence the educational situation significantly: A despising regard or an encouraging and benevolent glance from a teacher will certainly influence the student's dispositions, motivations, feelings and thoughts and probably even his or her self-estimation and role behaviour. We want to show that the reconstruction of corporal expressions can reveal significant insights into pedagogical realities by analyzing the explicit and the implicit scenery and by dismantling "unspoken" realities.

### **Organisers**

Bernd Hackl, Sandra Klampfl

# Corporal Expression in Teaching

## Impact and Investigation of a Tacit Influence on what is Learned in School

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### Abstract

The *Corporally conveyed meanings create pedagogical situations significantly and allow us to get insights into implicit dimensions of learning and teaching (e.g. into role perception, hierarchical realities etc.). For a comprehensive reconstruction of corporal meanings we are in need of a systematic methodological approach allowing us to consider fundamental aspects of nonverbal communication such as sequentiality, synchrony and interactivity.*

*In our workshop we will present our methodological approach to nonverbal communication and provide an exemplary demonstration of our empirical research: a study of corporal expressions oriented towards phenomenological ideas and based on an objective hermeneutical reconstruction of videotapes.text.*

### 1. Introduction

In the beginning of the 21st century modalities of teaching and learning in schools are being fundamentally transformed: Brute force and undoubtable authority are becoming more and more extinct, the age of infotainment, self-management and soft control has begun. To the extent that obvious injunctions in pedagogical settings decrease, constraints generated by the background scenery of teaching and learning activities increase. So educational influences are more and more realized by enjoyable attractions on the one hand, but on the other they are accomplished by the anonymous coercions of (intentionally installed or evolutionary evolved) practical constraints and inherent necessities that open learning paths or close them and shape the learners' expectations, habits and automatisms.

These facts are ignored by most of the common handbooks and accepted theories on planning, holding and evaluating lessons. They usually focus on decisions concerning methods of presentation, phases of lessons, taxonomies of learning processes, social techniques and more explicit dimensions that are mainly constitutive for the obvious 'foreground' of classroom interaction. Going beyond this view we assume that many important effects of contemporary styles of education and instruction can be understood as an outcome of what in the 1970ies was called the 'hidden curriculum' of schools and what recently has

been investigated under the programs of 'ethnographic', 'reconstructive' or 'discourse analytical' research on classroom proceedings: the structural conditions of doing school.

### 2. The implicit dimension of teaching

There are three main fields, where these structural conditions can preferentially be identified:

- The field of *language* – the implicit meanings of spoken or written verbal statements,
- The field of *bodies* – the tacit expressions and contextualization of corporal expression and - interaction,
- The field of *artifacts* – the unverballed resources and limitations of commodities, tools and spatial and temporal environments.

All the meanings they convey create and contextualize learning-contents and learning-processes and locate them in comprehensible practices (or make them opaque), they are able to represent intact frameworks of social interaction that offer good reasons to participate (or frameworks of oppression that encourage non-participation), they can support (or hinder) learners to find out how to cope with the challenges of these practices, they can help learners to develop self-effectiveness (or overrule their ambitions), they can provide resources of autonomous action and collaboration (or coerce into predetermined proceedings leading to externally controlled and alienating results) etc. To understand what goes on in schools it is necessary to shed some light on these structural conditions and their pedagogical effects.

In the German speaking scientific community (where we come from) there are at least five (sometimes overlapping) traditions of research on these implicit and background conditions of classroom interaction and pedagogical topics in general:

- Research on *tacit knowledge* which is held to be crucial for human life in general and especially for managing the demands of professional acting (also) in pedagogical contexts (e.g. Bromme [1], Radtke [2], Neuweg [3]-affiliating to authors like Polanyi [4], Bourdieu [5] or Ryle [6]).
- Research on the *subconscious* in the sense of psychoanalytical pedagogy (e.g. Datler/Bogyi [7],



- Ettl [8], Hofmann [9], Körner/Ludwig-Körner [10]-affiliating to authors like Freud [11], Adler [12], Aichhorn [13], Redl [14] or Zulliger [15].
- Research on (social, 'lifeworld', corporal etc.) *situatedness* of human acting and learning as it was conceptualised by critical theory, post-structuralism and phenomenology (e.g. Meyer-Drawe [16], Holzkamp [17]-affiliating to authors like Giddens [18], Bourdieu [5], Lave/Wenger [19], Merleau-Ponty [20]).
  - Research on implicit impacts of *power and domination* -mostly in the line of French critical discourse-analysis (e.g. Pongratz [21], Pongratz/Wimmer/Nieke/Masschelein [22], Ricken/Rieger-Ladich [23]-affiliating to authors like Derrida [24], Foucault [25] or Bourdieu [5]).
  - Research theoretically affiliating to authors mentioned above *and* conceptualised as *empirical* research in a more or less strict sense.

This last point, to which our work is intended to contribute, still follows specifiable (albeit again sometimes overlapping) methodological approaches and positions, for example:

- *Biographical Research on Education*: One of the most prominent recent 'qualitative' research-approaches in the German speaking educational science since the 1980ies, dealing with all kinds and scales of transformation in individual history, using different hermeneutic methods (Schütze [26], [27], Krüger/Marotzki [28], Siebert [29], Buschmeyer [30], Egger [31], Faulstich-Wieland [32], Kade/Nittel [33], Glinka [34], Marotzki [35], Fuchs-Heinritz [36]).
- *Pedagogical Ethnography*: recently developed as a discrete and independent approach in the German speaking scene, focused on ongoing interactions and environmental conditions in education, also using various 'qualitative' methods (Troman/Jeffrey/Walford [37], Brosziewski/Maeder [38], Rabenstein [39], Breidenstein [40]).
- *Grounded Theory*: the American 'classic', well known and frequently cited but not very often actually used in German-speaking research, based on a specified set of methods (Strauss [41], Glaser [42], Stebbins [43], Goulding [44], Clarke [45], Kelle [46]).
- *Documentary Method*: Adopted from sociological research (Bohnsack [47]), using particular methods tracing back to Mannheim [48] (Kölbl [49], Bohnsack/Schäffer [50], Marotzki [35], Wagner-Willi/Wulf [51]).
- *Objective Hermeneutics*: A methodology which was also developed in sociology, referring to ancestors like (early) Bourdieu [5] and Peirce [52], adopted in educational research contexts (e.g. Wernet [53]), used to analyse different objects such as classroom-communications (e.g. Combe/Helsper [54], Gruschka [55]), school-development-programs (e.g. Gruschka/Heinrich/Köck/Martin/

Pollmanns/ Tiedtke [56]), school-logos and -architectures (e.g. Böhme [57], Hackl [58]) or even paintings on pedagogical issues (e.g. Gruschka [59]).

### 3. The 'objective hermeneutic' methodology of reconstruction

Methodically we follow the concept of 'objective' or 'structural hermeneutics' (cf. Reichertz [60], Oevermann et al. [61]). The crucial idea of this approach is based on the assumption that the structure of a language provides an *objective* framework for the production of meanings through speech. These meanings emerge by the speakers' meaningful connection to the meanings just realized in each preceding moment. The very strict, precise and literal reconstruction of the sequence of factually produced meanings as fixed in a protocol (a transcript of a communication, a video recording of a scene or any other *materialized trace* of meaningful interaction) is held to be the key to both the explicit *and* the tacit dimension of communication as it has been realized in the protocolled situation. In the case of corporal expressions the meanings emerge by the actors' connecting corporally to the meaningful corporal states and actions realized in each preceding moment. Therefore, video scenes and freeze-frames (edited by a program that allows us to link the pictures to the literal transcript) are good techniques to comprise corporal expressions within the overall protocol.

Following the concept of objective hermeneutics, an interpretation has to regard five main rules of proceeding to ensure a comprehensive and significant reconstruction: Every protocol has to be interpreted ...

- *sequentially*, which means that the reconstruction strictly follows the 'evolution' of meaningful actions by investigating the chain of occurrence (later produced meanings cannot be constitutive for earlier ones and therefore are prohibited to be involved in the reconstruction of them),
- *devoid of context*, which means to firstly analyze the content 'in itself' to ensure that every difference between the context-free and the context-bound understanding can be exhausted for reconstructing its full meaning,
- *literally*, which means that every detail has to be recognized and interpreted as important information, following the logic of the 'Freudian slip,' it is not important what the author *wanted to say* but what he *factually said*,
- *extensively*, an appropriate interpretation of any expression of meaning requires the greatest possible number of hypothetical readings; this allows untenable versions to be excluded by the proceeding reconstruction while it prevents the

loss of certain dimensions or aspects of meanings because they have been ignored,

- *sparingly*, which means that only readings are accepted that are seriously defensible without any further assumption which is not strictly provable by the content of the protocol.

The methodology of objective hermeneutics claims to investigate the social world – as its name announces – in a strictly objective way. It submits to all scientific standards of quality (as known from the 'hard' sciences) except for the crucial fact that it refers to an abstract *symbolic mediated world* (in contrast to a natural, physical world). It offers a very fruitful way of gaining information about all kinds of meaningful objects and occurrences, or as the 'objective hermeneutics' says: about its 'latent structure of sense'. Above all this includes the habits of the speakers, their tacit assumptions, the ambiguities and contradictions of the produced meanings and within that all the 'software' of tacit governance and structural domination. Therefore a structural analysis of a case allows us to identify the structural disposition of a *certain situation* (e.g. of the didactic proceeding as an individual event) as well as the structural disposition of a certain *historical state* of society (e.g. of schooling in advanced capitalist countries at the beginning of the 21st century for which the individual event is an exemplary detail).

#### 4. The 'Language' of Corporal Expressions

Since it was developed for literal texts, the method contains one rule that cannot simply be transferred to *corporal expressions*, and that is *literality*: Contrary to verbal language corporal expressions are not primarily based on a *symbolic* system (e.g. in the sense of Peirce [53]) and therefore it is impossible to interpret them *literally*. The *word* 'sadness' stands for a certain feeling, its meaning is due to convention and this convention bridges the speaker's and the listener's comprehension. On the contrary the *corporal expression* of sadness can be understood without using the vocabulary of any language, it can be *experienced immediately*.

What is it, then, that ensures that the 'received' message is according to the 'sent'? Before clearing this question two crucial distinctions have to be drawn: A *corporal expression* is different from a *corporal emblem* (such as nodding to agree) which gets its meaning in the same way as a word or a conventional pictorial sign (such as the red traffic light for 'stop'). And: Apart from *incidental* expressions we can of course produce *intentional* corporal expressions: If we *portray* sadness', we produce an *iconic sign* (see Peirce) bodily that represents 'sadness' by its innate attributes.

Now, pursuing the former question we have to consider: *Incidental* corporal expressions are not

intentionally 'sent'. The 'first person', however, need not even be aware of the expression a second person receives from him/her. Spontaneously produced corporal expressions are nothing more than the appearance of the ongoing status of the 'sender's' body which a second person can experience.

The 'corporal language' therefore does not consist of *signs* that *represent* a certain meaning, the 'message' rather *emerges* from the *mere state* of a certain corporal detail: The detail reveals, what goes on by being what it looks like. E.g.: If we 'open' our arms, we shape a real 'openness'. So if we try to 'read' corporal expressions we have to ask: What is it precisely that happens bodily and what does it mean if we take it 'at face value'? What *interpreting literally* (in the sense of objective hermeneutics) means for literal texts has to be understood in the case of corporal expressions *as reconstructing exhaustively what happens bodily in terms of meaning*. But how can we find adequate 'terms for different meanings (corporal proceedings and changes)?

Under the title of an 'alphabet of corporality', a very inspiring attempt to develop a categorical scheme for such terms has been worked out by the German phenomenologist Hermann Schmitz. It is based on the assumption that the 'transmission' of corporal meanings can be described as a *suggestion* that is grounded in objective qualities of a corporal state (or furthermore the shape of a thing, a color, a sound etc., see Schmitz [63], [64]). Schmitz derives the meaningful dimension of corporal phenomena using a pair of fundamental categories:

- *Contraction* and *expansion* – These are the fundamental activities of the living human body.
- Contraction and expansion can occur simultaneously or sequentially (one alternately dominating the other etc.). When they occur sequentially, we obtain a sense of *rhythm*, when they occur simultaneously, we sense *intensity*.
- This intensity may have the character of *tension* (if the tendency of contraction dominates the tendency of expansion) or *inflation* (if expansion is dominating). It may even escalate to *privative contraction* (when expansion collapses) or *privative expansion* (by collapsing contraction).
- The movement of the body is pervaded by the contrasting tendencies of sensing either a sharp pointed mark or one that emanates in a faint or diffuse manner. Schmitz calls these tendencies *epicritical* and *protopathic*. *Epicritical* refers to the tendency to locate places distinctly; *protopathic* is the tendency of locations and contours to become indistinct (cf. Schmitz [63]).
- Contraction and expansion also imply a sense of direction which is rooted in the *absolute locality*, because the spatial form of the present is the *narrowness* of the body moving over into the spatial *wideness* that is spatially indeterminate.

Schmitz' basic categories (of which we mentioned only a few here) enable us to accountably 'look and speak' in what we could call 'the language of the body subject' ('lived body, 'felt body', German: 'Leib', French: 'chair')

– considering that there is no 'language' in a conventional sense – and to describe the impartial experience of life. So we can reconstruct corporal expression scientifically (which always means: in terms of language), we can verbally comprise the ongoing corporal process using the information stemming from what we can sense with *our own* felt bodies: suggestions of moving, synaesthesiae, atmospheres, situations etc.

## 5. The workshop

It is our aim to get into contact with researchers who share our research interests and could be partners to enrich the discussion of our position and the procedures and results of our work; maybe partners for collaboration on a future project.

During the workshop we will start with a brief *theoretical* introduction into the topics. Then we are going to demonstrate the method of objective hermeneutics *practically*. As it was originally developed as a procedure for groups of researchers – mainly to ensure a great number of hypothetical readings (see above: '*extensivity*') – a workshop seems a good occasion for exemplifying its logic by practical use. We will begin with the systematic reconstruction of the *literal* text of an English-lesson's start up (in an Austrian upper secondary school) and then follow up with an interpretation of the appendant *corporal* expressions.

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## **Workshop 9: Continuing Teacher Professional Development: A Simulation Exploring a Model for School- Based Teacher Learning**

Participants in this workshop will examine the case of Jewel Malan, principal of Mabaleni Secondary School, who is frustrated with the low impact of Continuing Professional Teacher Development (CPTD) programmes on teacher performance and student learning. Using documents from the school needs assessment, participants will join Principal Malan as she endeavors to build a school-based programme with the goal to raise matric (school-leaving exams) pass rates, raise staff morale, and improve the school's image among stakeholders.

This workshop is designed for teachers and practitioners in the teacher development field to understand a model for CPTD in which teachers become the core facilitators of their own professional development.

### **Organisers**

Kakoma Luneta, Mitalene Fletcher

# Designing Professional Development Programmes for Teachers: Tools and Techniques

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## Abstract

*There is consensus among education stakeholders that the rate of social change and educational change make pre-service training an inadequate basis for long term professional competence. Continuous professional development is an essential instrument for improving educational quality. In South Africa, where teacher development is a national priority, it has become increasingly important that teachers contribute to the development of their own programmes given that conventional university-based programmes have not adequately impacted student learning. The development of these professional development programmes must be informed by a needs analysis that identifies teachers' curricula, professional, instructional, and content needs. This paper identifies critical elements for consideration in developing effective school-focused professional development programmes and provides the theoretical framework for a teaching case set in South Africa in which a principal endeavors to raise matric pass rates, bolster staff morale, and improve the image of the school.*

## 1. Introduction

For teachers to remain sharp and focused in their content and pedagogical content knowledge they must participate in Continuous Professional Development (CPD). Research has identified Continuous Professional Development as the essential ingredient in the drive to improve literacy standards and effective instruction [1], [3], [5], [11], [12], [18], [21], [22]. The purpose of professional development is to enhance the quality of pupils' learning by improving the quality of teaching through constant review and assessment of teachers' instructional approaches, identifying the effective approaches and capitalising on them for the benefit of the learners [5], [40]. The South African Department of Education (DoE) [12] acknowledges that both conceptual and content knowledge and pedagogical knowledge are necessary for effective teaching and that teachers need to enhance these skills. Hence, professional development programmes

are intended to improve the professional knowledge, skills and attitudes of teachers so that they can educate learners more effectively [4], [11], [12], [17], [21], [22], [35]. Briefly, professional development for teachers involves the transfer of new knowledge, skills, behaviour and attitudes to perform or enhance performance of specific roles in the classroom.

There are various definitions of professional development by Ganser [18], Villegas-Reimers, [40], Liberman [26], Cohen [7], Cochran – Smith and Lytle [5], Walling and Lewis [41], King and Newman [24], Dudzinski et al. [13]; and Johnson et al. [19]; Of particular note is Eraut's [15] view of professional development (chosen for its emphasis on learning), which sees it as 'that dimension of school life which concerns the professional learning of staff'. Shaw gives a more illustrious definition by saying,

'It encompasses the first-hand experience learned at the chalk-face, courses and in-service training attended by the individual professional; reading, good practice in teaching and management learnt from other colleagues, both consciously and unconsciously, as well as individual and team staff development gained in meetings with other teachers to discuss matters of common concern.'

All these processes would support the development of expertise as they are intended to equip the teacher with hands-on-experience and exposure.

## 2. The need for professional development for teachers

Professional development is an important undertaking in any given profession but more so in the teaching profession. This is because teaching makes demands on practitioners to be always mentally alert, a point reinforced by Veugeles and O'Hair [39] who call teaching the "core profession, the key agent of change in today's knowledge society. Teachers are the midwives of that knowledge society. Without them, or their competence, the future will be malformed and stillborn." Given the above scenario where teaching assumes such critical significance, professional

development becomes essential. Some of the reasons for it are as follows:

- To extend the job performance of an individual teacher for career development or promotion [1], [5], [15].
- To develop the professional knowledge and understanding of an individual teacher. The teacher is conceived as a reflective practitioner who enters the profession with knowledge but acquires new knowledge and experience based on that prior knowledge [26], [40].
- To enable teachers to participate and prepare for change. It is acknowledged that teachers learn over time and professional development is perceived as a long-term process, thus a series of related experiences, rather than a once off, is seen to be more effective as it allows teachers to relate prior knowledge to new experiences and develop their practice [3], [7], [12], [13]. Regular follow-up support for teachers is regarded as an 'indispensable catalyst of the change process' [40].

The above reasons illustrate the role professional development plays in enhancing the quality of teaching and hence that of learning.

### **3. Models of continuous professional development**

Models of professional development have been categorised according to the sites where they take place: School-Based Professional Development, School-Focused or School-Centred Professional Development and Off-Site Professional Development [2], [3], [4], [27], [35]. There is also the distance education model in Southern Africa and other Commonwealth countries which comprise the training of untrained or under-qualified teachers through distance-communication by radio or television supported by reading materials developed by the facilitating institutions [6], [29]. The distance education models are in-service models usually meant for teachers already in the schools. In the United States of America, there are also professional development schools, which involve partnerships between teachers, administrators and university faculty members created to improve teaching and learning among participating schools and teachers [10], [40]. These schools provide professional development experiences for pre-service and in-service teachers in school settings [16]. The recently introduced Advanced Certificate in Education (ACE) programmes found in most South African universities are another example of professional development programmes meant to enhance teachers' qualifications as well as their expertise in the classroom [12]. While in-service programmes are developed to improve the qualifications of the

teachers, there is little evidence showing that they lead to improved classroom practice.

### **4. Off-site professional development programmes**

These are the dominant models of professional development in Southern Africa. Teachers meet each other at colleges of education, universities or teacher centres for courses of varying duration, sometimes resulting in a certificate or award of some kind. The main weakness of the 'off-site' model is that it creates a gap between theory and practice and according to Craft [8], the model also lacks 'supporting cultures in valuing individuals' off-site experience for the team or school as a whole'. The major advantage is the chance for teachers to learn new ideas and to interact and exchange ideas with colleagues [3], [20].

### **5. School-based professional development programmes**

These are models that base their professional development activities within the school and target a group of staff members. These programmes can be in the form of university-school partnerships where universities 'connect practitioners who share common interest and concerns about education' [31]. The major objective of these programmes is the attempt to achieve a better match between a professional development course and the needs and culture of the participating group [3], [8]. One drawback is that it becomes insular, due to the limited use of inside staff as mentors or facilitators. School-based professional development has been seen as meeting the needs of the school rather than those of the teachers.

### **6. School-focused professional development**

School-focused professional development is the same as the school-based model as far as the target group is concerned. It is directed towards the staff of a particular school and the programme of study is related to the needs of the particular group or school [8], [36]. These programmes have also emerged as university-school partnerships [31]. School-Focused professional development programmes can take place either on or off the job-site and can be provided by outside agencies such as university or college staff or by the school itself [40]. Johnson et al. [ describe one such example in a project in South Africa where groups of science teachers came together for different forms of professional



development: coaching, group discussions and group work based on Curriculum 2005. School-focused professional development emerged in response to the threat that school-based professional development programmes faced the danger of parochialism and that teachers therefore needed to learn from each other, as well as other schools and those providing training in other institutions. The schools were considered to be limited in resources and the range of activities they could provide on their own and that they might solely concentrate on the internal problems and forget the external problems that contributed to them [9], [15]. School-based professional development programmes are not common in Southern Africa. Most programme designers would prefer a collection of teachers from different schools [29]. Theoretically therefore, school-focused professional development programmes offer advantages over the 'school-based program with those of externally conducted courses while minimising the disadvantages of both' [9]. This implies that school-focused programmes would be ideal given that they address the needs of the target group and improve the quality of teaching as a result of collaboration-among others. In the South African context, the merits mentioned above apply, especially to township and rural schools, whose partnership with universities works in their favour as they gain valuable support from the latter.

## 7. Designing a professional development programme

An effective professional development programme must be designed from a needs assessment. The curriculum of the training programme must be informed by the needs of the teachers, the school, and the learners. Needs assessment is used to obtain diagnostic data and enable educational needs to be defined and priorities set [38]. English and Kaufman [14] define needs assessment as:

[A] tool which formally harvests the gap between current results (or outcomes, products) and required or desired results, places these gaps in priority order, and selects those gaps (needs) of the highest priority for action, usually through the implementation of a new or existing curriculum or management process.

The advantages of a needs assessment, especially for a professional development programme for teachers cannot be over-emphasised. Marsh [30] identifies needs assessment as having the following advantages:

- It is a fair way of deciding upon priorities for teacher development.
- It can lead to innovative and creative priorities and solutions, for instance in one study the prospective mentor teachers were

quite innovative in determining the sort of training they needed in practicum supervision [29].

- It can be an efficient procedure of determining the pedagogical and content needs of teachers.
- It is a valuable technique for getting different groups, schools or subject teachers to discuss issues and to agree upon shared values and mutual support.

It is critical to consider that people are motivated to learn or carry out a task when they know that through their efforts they can satisfy a need or a want or that it may earn them prestige or increase their income and therefore provide a better livelihood for themselves and their family. Motivation is essential in ensuring that teachers participate in professional development programmes. Research has shown that learning is at a maximum when people are motivated [21], [25].

There are five essential steps in designing the needs assessment for a successful professional development programme for teachers:

- Preparing is making decisions about the resources available, time allotted and the participants. By assessing the needs one is able to gauge the resources, mainly the facilitators, and other physical requirements such as classrooms for the training, how long it would take to cover the curriculum, and the materials needed to develop it and the participants.
- Stating of goals would involve the compilation of a list of what should be covered and the objectives of the coverage. Both the facilitators and the participants should be involved in this exercise. The main goal of the needs assessment would be to identify areas in teachers' instructional approaches and content knowledge where they need more exposure and assistance.
- Goal translation is converting the statement of the goals into instructional objectives, that is, the areas identified by the goals should then be translated into the contents of the professional development programme and the training materials.
- Testing is selecting and administering instruments (questionnaire and interviews) to ascertain current levels of teachers' pedagogical, content or professional development, performance, and to learn whether teachers in schools meet the desired professional levels.
- Collating the data is organising the data into appropriate tables, graphs and charts in this case; the data can be developed into professional development materials to be used for training.

## 8. Setting professional development programme objectives

The objectives of a professional development programme state what will be accomplished as a result of the training and are defined in the light of the identified needs. Professional development objectives may indicate that the trainees will display an understanding of certain concepts, demonstrate a given skill or show a change in attitude. The training objectives may specify the content, method of instruction, reading materials and types of evaluation strategies. The objectives of any professional development programme are essential in successfully planning and evaluating learning outcomes. In essence, clarifying training objectives provide a sound basis for:

- Organising the trainer's work
- Informing trainees/teachers of the learning expectations
- Selecting the training materials and methods
- Delivering an effective professional development programme
- Evaluating the success of the programme

Clearly defined training objectives serve to maintain focus throughout the training. The professional development programme objectives provide an important link between the needs-assessment and the design and preparation of the training materials, as well as the basis for evaluation as they assist the trainer to assess if the objectives were met. Swanson et al. [37] assert that in converting needs into objectives, three areas of performance may be identified: skills, knowledge and attitude. Skills-related objectives indicate what the trainee can do, demonstrate or perform, for example: 'at the end of the programme the teachers will be able to set problems that require learners to investigate the origin of Pythagoras Theorem'. Knowledge-related objectives refer to the teachers' ability to identify, define and describe given concepts as a result of the professional development programme such as 'at the end of the programme teachers should be able to differentiate between skills-related and knowledge-related objectives'. Attitude objectives relate to the attitudinal changes that are expected as result of the programme.

## 9. Implementing a professional development programme

A professional development programme can be conducted by one or several trainers over several hours or days. The main advantage of having several trainers is that their diversity makes the training more interesting as it can be difficult to maintain

attention if teachers have to listen to one facilitator for an extended period. All trainers must be technically competent in the subject and have experience as trainers and credibility with the trainees. In addition, trainers must be familiar with the circumstances in which the teachers work and the problems they face. The trainers must be willing participants in a professional development programme and should participate in discussion sessions, prepare additional materials or training sessions if required, interact with trainees, and contribute to practical sessions. Hence, the team of trainers in a professional development programme should, in part, comprise teachers so that the programme is informed by actual daily teaching experiences.

Every professional development programme must have a leader whose roles are to:

- Coordinate the training by briefing the trainers/mentors on their roles as well as provide leadership in developing programme schedule
- Facilitate the introduction and allow facilitators to become familiar with each others' strengths
- Create an atmosphere conducive to team-work
- Discuss with the rest of the trainers the objectives of the professional development programme
- Provide information on the participants and local circumstances
- Hold regular meetings to assess progress and report or discuss any improvements required. The meetings can form part of the evaluation strategy.

### 9.1. Logistical support

In addition to the content development, pre-programme preparations, and presentations, logistical arrangements also need to be considered before, during and after the course. The facilitator, team leader or trainer must ensure that the logistical supports are in place and satisfactory to accommodate all the training sessions. The list below outlines some of the key points that the trainer or the team leader may consider.

### 9.2. Before the professional development programme

There are many aspects of the training that need to be put into place before it actually begins. Below is a list of important considerations:

- Identify and engage appropriate instructors

- Select the training venues and ensure that they are well lit and well-ventilated with adequate space
- Select and notify the teachers, through the proper channels (the school principals), of the dates, times and location. This action will be guided by the needs analysis.
- Prepare training materials. This action will also be guided by the needs analysis
- Arrange for appropriate training equipment (may include chalkboard and chalk, markers, pens, flip charts, writing materials, slides, overhead projector, computer or laptop, video equipment, screen, etc.). Check that the equipment works. Do have back-up equipment in case the preferred one malfunctions.
- Arrange training room, seating arrangements, name tags, position of chalkboard, screen, etc.
- Arrange coffee and lunch breaks during the training
- Arrange transportation and accommodation for outside trainers or facilitators as appropriate

### 9.3. During the professional development programme

Even when the professional development programme has begun, the facilitator still needs to consider the following:

- Remind other facilitators of their sessions
- Introduce and thank facilitators and visitors
- Ensure contingency plans are in place
- Check facilities and equipment and replenish materials
- Ensure teachers receive course materials

### 9.4. Following the professional development programme

Programme evaluation and reporting, while beyond the scope of this paper, are critical elements of any learning endeavor. Evaluation is the systematic and ongoing process of collecting information which can be used to guide decision making and assess the relevance and effectiveness of the entire programme or the various components of the programme [36]. It is advisable that the evaluation seeks to authenticate the content of the curriculum that has been identified from the needs of the participants and the quality of the professional development programme. There are numerous resources that offer good guidance in this area [21], [22], [34].

## 10. Conclusion

This paper has reviewed the current literature on professional development for teachers and identified approaches to developing a school-focused programme. It has highlighted the importance of identifying the teachers' needs before a professional development programme can be instituted. The participation of teachers in identifying their needs for workshops or seminars, developing materials, or facilitating sessions cannot be over emphasised. A professional development programme for teachers is likely to have strong, sustainable outcomes if teachers play a central role from its inception.

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## **Sessions**

## **Session 1: Cross-disciplinary Areas of Education**

Barriers to Inclusion of Students with Special Needs at Sultan Qaboos University  
(Ibrahim Amin Alqaryouti)

Indigenous Education in Comparative Perspective: Global Opportunities for Reimagining Schools  
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Factors Effecting Passion towards Learning in Engineering Classroom  
(Quamrul H. Mazumder, Mary Jo Finney)

# Barriers to Inclusion of Students with Special Needs at Sultan Qaboos University

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## Abstract

*This study aimed at identifying the barriers to inclusion of the students with special needs in Sultan Qaboos University. The sample of the study consisted of 28 students 16 male and 12 female. Eleven students were visually handicapped and 17 students were physically handicapped. The researcher used a questionnaire for the purpose of the study which consisted of 59 items. The validity and reliability of the instrument were determined, and the correlation coefficient indicated the suitability of the instrument for estimation. The results of the study indicated that there were statistically significant differences in the barriers to inclusion due to the type of disability and scored by the visually handicapped. On the other hand, there were no statistically significant differences in the obstacles of the inclusion due to the gender or the degree of the disability, but there was a statistically significant difference for the interaction of the two variables, the degree of disability and the gender.*

## 1. Introduction

The inclusion of students with special needs into public schools has been a key topic of most educational systems in the world. Consequently the issue of educational inclusion is a concern for educational politics in many countries. From the early years of the 18<sup>th</sup> century, legislators in many countries adopted the concept of full inclusion which means creating an educational system that services equally all the students regardless of their differences. Recently, a new trend has appeared known as General Education and The Holistic School or the school that does not exclude any student. In general, many educators have advocated for the deletion of the dual educational systems (special education, general education) and for integrating them in one educational system that meets all the students' needs. Schools were requested to carefully reconsider the

education of special needs students in regular classrooms instead of placing them in more restrictive environment [6], [14], [18].

## 2. Literature Review

There are many arguments about the educational, social, and ethical issues that would result from the inclusion of the students with special needs in regular classrooms. Many educationalists believe that such inclusion would help disabled students to integrate better into society, in addition to the academic and social benefits which would enhance their opportunities of social adjustment and social sufficiency and reduce the many negative affects that would appear as a result of their isolation. It could also enhance the perception of the nondisabled student of the disabled student. And improve social and communication skills of both groups.

On the other hand, there were many opponents for inclusion who claimed that the general education system not well prepared for such inclusion. In addition, research' results have not confirmed the effectiveness of inclusion. Added to this, the students with special needs require more intensive interference which might not be available in the general education schools. Thus, there are many considerations which should be regarded before taking such steps [4], [5], [7], [8], [17].

In order for inclusion of the students with special needs to be successful, schools and universities should accept innovation and diversity. All the participants in the education field should believe in that. These participants should also believe that the students with special needs are able to interact successfully in the learning process. The educational staff should be supported and the educational practices should be flexible with regard to the outcomes, constructive education, assessments, and evaluation. [19], [22]

It is very essential to consider the facilities available in the school and university buildings which would facilitate the needs of disabled students. There



should be careful consideration about classrooms, lights, elevators, and assistive tools which the handicapped students might need [18].

There must be appropriate technology such as preferential seating, modified desks, large printed books, and wheelchairs would help disabled students to interact better with their normal peers. For that reason, it is important for the advocator of the inclusion to provide the normal students with essential information about types of disabilities and the assistive equipment which are used by their disabled peers [19], [20], [21].

The process of inclusion also requires devoting sufficient space for the storage of the equipments such as typewriters, wheelchairs, removing all the obstacles inside or outside the building to ensure safe movement also providing helping systems in the library or in the computer labs. Add to this, making normal students fully aware about their handicapped peers. Some adjustment on their dwellings which would help the disabled students in their traveling [1].

Many studies have discussed the difficulties that face the handicapped in the educational environment. Hodges and Keller [11] made a study aimed at recognizing the extent to which students perceive the process of inclusion the handicapped students in the university. The results indicated that there were many problems that faced visually impaired students. Such problems were in transport, and developing a social relationship with their peers.

Haugann [10] looked a study at identifying the visually handicapped students in higher educational institutions. The results indicated many different problems; for example the absence of counseling services, few numbers of Braille printed books, lack of visual readers, the difficulty of adjustment with the university life, teachers' neglect of their special needs, and the problem of taking exams and transport in were the most important.

Fuller, Healey, Bradley and Hall [9] also studied obstacles that faced the handicapped at university. The results of the study indicated that there were many obstacles such as the fast rate of the teachers' speech during the lectures, as well as difficulty in participating in the discussion and answering the questions. Also some lecturers resented allowing disabled students to tape the lectures, and it was hard to access the educational centers. There was a lack of suitable computer programs.

Masaedeh's study aimed at identifying the problems of handicapped students in Jordanian universities [15]. The results indicated that the most obvious problems were those which were related to the

services. In addition, there were many concerns about the future of disabled students, and their psychological, social, and health issues. On the other hand, the study did not show any significant differences due to the gender of the disabled grade level, type of disability.

Ibrahim [13] studied the problems of visually handicapped students in the University of Jordan. The results of the study revealed the existence of problems such as using the library, transport, difficulties in teachers' understanding about their needs. The study did not show any significant differences due to the handicapped gender, the degree of disability, level of education.

Alahmadi [3] studied the problems which were facing the physically disabled students in regular education schools. The study indicated that there were many problems related to the structure of the building and the classrooms. In addition, many handicapped students were not able to participate in different activities thus; their feelings of loneliness and isolation would increase.

Zakarya [23] pointed to a range of difficulties that were facing the handicapped students who were integrated through regular schools. Such difficulties were presented in the shortage of qualified staff, the negative attitudes of teachers towards them, complaints from normal peers about the behavior of the disabled students, the rejection of having any relationship with them, and the lack of suitable services provided to the handicapped in the schools.

Al hamad [2] also highlighted the most important problems facing physically handicapped students which include the feeling of loneliness, improper habilitation, disrespect for, their private parking, insensitivity towards them, and lack of elevators and appropriate entrances to facilitate movement.

Herz Allah [12] studied the difficulties and psychological effects that resulted from the restrictive environment of physically handicapped students. The results indicated difficulties resulting from their isolation, lack of environmental adjustments which would facilitate their movements, and difficulties in developing personal relations with normal people.

Noghoi [16] studied the problem which visually handicapped students faced in the Jordanian schools, in particular the educational, environmental, psychological, and social difficulties. On the other hand, the study did not show any different problems due to the intensity of the disability, gender, or the educational school level.

This study is based on the result of other researches' and modern educational studies in the field of educational inclusion of handicapped students in the

regular educational environment. In addition, there were many obstacles that were faced by the handicapped students such as learning difficulties, unsuitable curriculum and teaching methods, and the lack of aid-equipments. Beside this, there were psychological and social problems that students faced through the educational inclusion programs. Such problems included their relationship with their peers and teachers, inability to accept each other, low self-esteem and confidence, and feelings of isolation and loneliness. In addition to the environmental obstacles, there was also a lack of facilities which negatively affected academic performance, social and psychological adjustment. This would turn the concept of inclusion into a nightmare to fulfill. This would aware us to the importance of reconsidering the idea of inclusion of those handicapped students at this university and to face such obstacles to ensure the idea of the least restrictive environment.

Accordingly, this study aimed at answering the following question:

- 1) Are there any differences in the obstacles that facing students with special needs according to the type of their disability which are revealed by the dimensions of used instruments?
- 2) Are there any differences in the obstacles of the inclusion of the students with special needs due to the following variables: gender, degree of disability, and the interaction between them according to the used instrument?

### **3. Analysis of Findings**

#### **3.1. Sample**

The sample of the study consisted of 28 physically and visually handicapped students according to the information from the Deanship of Students' Affairs in SQU during the year 2008/2009. There were nearly 11 visually handicapped students, 17 physically handicapped students, 9 students with mild disability, and 19 students with moderate disabilities.

There were 16 male students and 12 female students. Twenty of these students were in humanitarian colleges and 8 in scientific colleges.

#### **3.2. Instrument**

The researcher used a questionnaire designed by Noghoi [16]. To meet the purpose of this study, the

researcher deleted and added some items to the instrument. The initial version consisted of 67 items.

The researcher presented his instrument to a panel of nine judges who were specialists in psychology and special education in the faculty of education in SQU. After reviewing the questionnaire, the researcher completed the requested changes, the final print consisted of (59) items, distributed among the following four domains:

- The Educational Domain (EdD): this domain consisted of (16) items. Examples of these items are: "part of the curriculum which I study does not meet the nature of my disability"; "some teachers are annoyed when I use my special assistive tool inside the classroom".
- The Social Domain (SD): This domain consisted of (14) items. Examples of these items are: "my classmates hesitate before asking me to join them for a walk", "I feel embarrassed about the repeated questions about the nature of my disability".
- The Psychological Domain (PD): This domain consisted of (13) items. Examples of these items are: "I feel angry about others' sarcasm while I am moving in the university", "I feel annoyed about some of teachers' complains about my presence in their classes."
- The Environmental Domain (ED): This domain consisted of (16) item. Examples of these items are: "There are no special parks for the handicapped near the faculty's building", some barriers and obstacles into university endanger my life".
- The researcher estimated the reliability of the instrument by using Cronbachs Alpha Coefficient which was for the first domain (0.93), for the second domain (0.86), for the third domain was (0.86), for the fourth domain (0.77), and for the whole instrument it was (0.93).

#### **3.3 Procedures**

With the help of some female students from the early childhood education department, the researcher distributed the questionnaire to the members of the sample. The Data was collected during the second semester of (2009), and then it was estimated by using the statistical program (SPSS). Analyzing the results was according to the variables of the study.

#### 4. Contribution of Knowledge

To answer the first question, the researcher estimated the mean scores and the standard deviation of the sample about the domains of the instrument which are explained in Table 1.

**Table 1. The mean scores and the standard deviations of the sample responses at the domains of the instrument according to the student's category**

Domain	Type of Disability	Mean	S.D
EdD	Blind	16.700	5.078
	Physically	6.500	1.653
SD	Blind	37.400	11.037
	Physically	21.944	7.596
PD	Blind	28.500	10.373
	Physically	21.222	9.078
ED	Blind	45.100	10.126
	Physically	23.055	8.673

The Table 1 shows that there were differences in the mean scores between the visually and physically handicapped students in the different domains of the instrument. And to be sure about the indications of these differences, the researcher estimated the value of (f) for One Way ANOVA explained in Table2.

**Table 2. The One Way ANOVA Analysis of the differences in the degree of the disabilities in the domains of the instrument with each different student's category**

Source of differences	Sum squares	Degree of Freedom	Mean of Sum squares	(F) Value	Alpha
EdD	544.11	1	544.11	50.779	0.00
SD	1535.620	1	1535.620	19.1221	0.00
PD	340.496	1	340.496	3.736	.064
ED	1654.870	1	1654.870	19.541	0.00

According to Table 2, it was clear that there was a statistically significant difference among the domains of the instrument. The first was the educational domain, the second was the social domain, and the fourth was the environmental domain and scored by the visually handicapped students.

To answer the second question, the researcher estimated the mean scores and the standard deviation of the sample seen in Table 3.

**Table 3. The mean scores and standard deviation of the sample responses at the instrument's domains according to the gender and the degree of disability**

And to estimate the value of Alpha, the researcher did The Analysis of Covariance, explained in Table 4.

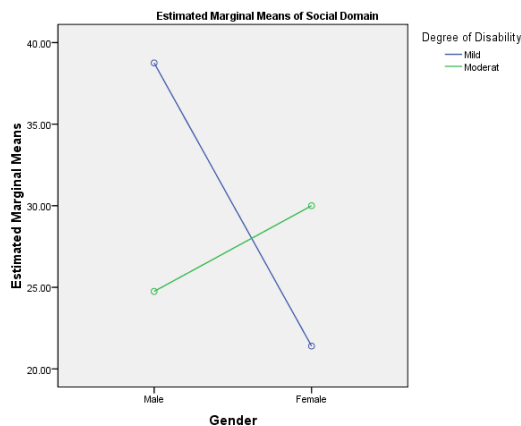
Domain	Gender	Degree	Mean	S.D
EdD	Male	Mild	9.00	2.708
		Moderate	10.50	4.582
	female	Mild	11.60	7.956
		Moderate	11.71	6.993
SD	Male	Mild	38.75	11.221
		Moderate	24.75	9.854
	female	Mild	21.40	13.794
		Moderate	30.00	7.6376
PD	Male	Mild	30.25	12.365
		Moderate	24.08	9.307
	female	Mild	17.80	7.823
		Moderate	24.00	10.84
ED	Male	Mild	29.50	6.137
		Moderate	36.83	12.967
	female	Mild	36.40	16.1647
		Moderate	33.14	10.447

**Table 4. The Analysis of Covariance to explain the differences in the inclusion of the students according to the gender and the degree of disability variables and the interaction between them**

	Source of difference	Sum squares	DF	Mean Sum squares	(F) Value	Alpha
Gender (1)	EdD	21.516	1	21.516	0.646	0.430
	SD	216.522	1	216.522	1.865	0.185
	PD	232.308	1	232.308	2.360	.0138
	ED	15.234	1	15.234	0.100	0.755
Degree of Disability (2)	EdD	3.854	1	3.854	0.116	0.737
	SD	43.124	1	43.124	0.371	0.548
	PD	0.002	1	0.002	0.000	0.997
	ED	24.572	1	24.572	0.161	0.692
(2 × 1)	EdD	2.840	1	2.840	0.085	0.773
	SD	755.349	1	755.349	6.506	0.018
	PD	226.171	1	226.171	2.298	0.143
	ED	165.868	1	165.868	1.087	0.308

The Table 4 shows that there was no statistically significant difference due to the gender and degree of

disability variables in all the instrument domains. On the other hand, there was a significant difference in the interaction between the gender and the degree of disability in the social domain only. The Figure 1 explained the interaction between the gender and the degree of disability in the social domain.



**Figure 1. The interaction between the gender and the degree of disability in the social domain**

## 5. Discussion

This study aimed at identifying the barriers to inclusion of the students with special needs in SQU. The results of the study showed that there were statistically significant differences in these obstacles due to the type of disability among the visually handicapped students who indicated obvious problems within the first domain. They suffered from problems of following the curriculum, test performance, and writing a research paper. This might have resulted from the type of the disability from which they suffer and from the other side, the materials they used through their writing and reading. The visually handicapped student used the Braille method in reading and writing which is very slow and needed twice the amount of time compared to the time needed in regular reading and writing.

In addition, it was difficult for regular teachers to read in the Braille method. This made the situation more complicated especially when the handicapped students needed some help from their classmates during the exam period. This might be difficult because their normal peers would be also involved in their own revision for the exams.

The results also indicated that the visually handicapped student had problems in the social domain compared to the physically handicapped students. This might be a result of their inability to interact with other people, of being neglected, lack of activities that helped the visually handicapped students to interact with normal peers inside the university which increase the distance in between them.

The study indicated that there were some problems for the visually handicapped students in the environmental domain. These problems might occur because the visually handicapped students might not reach the lectures, restaurants or other places which were eases to reach for the physically handicapped students.

The environmental conditions were often a source of danger for the visually handicapped students because they had not practiced reaching these places and they did not receive any help from other normal peers.

This result agreed with what Hodge and Keller [11] and Hougann [10] discovered in their studies. In addition, the result of this study agreed with the results of Al- hamad [2], Ibrahim [13], and Noghoi [16]. The results of the previous researches identified the educational, social and environmental problems that the visually handicapped students would encounter at the university. Such results made the supervisors and the other people responsible aware about the places that might be needed to be trained the visually handicapped students. Some of the suggestions that SQU might consider are discussed in the following paragraph:

The assistive tools which would help the visually handicapped students in getting the required information from the libraries must be made available. Providing the teachers who might teach those handicapped students with enough information about these students, the assistive tools they need and the alternative assessment that teachers need in their evaluation and making the handicapped students more familiar with buildings in their universities which would facilitate their movements from one building to another.

Add to this, there must be well qualified staff that recognizes students' needs, availability of recorded books, making the normal students more aware of the difficulties that their visually handicapped students encounter, and choosing suitable activities that would help the visually handicapped students to interact effectively.

Concerning the gender and the degree of disability variables, the result did not show any statistical difference between the male or female handicapped

nor between the mild or moderate disability. This result agreed with what was found in the study made by Ibrahim [13], Noghoi [16], and Masaedeh [15]. According to the result of this study, it was found that obstacles to inclusion in the university would happen regardless of the gender or the degree of the disability of the handicapped. The researcher pointed at those variables as a part of the limitation of the study. This happened because of the few number of cases in cells, which did not help the researcher to analyze the gender variable from each type of the examined disability. Add to this, there were not any sever cases in the sample of the study which limited the study to only the mild and moderate disabilities.

The study also indicated that there were significant differences from the interaction between the gender and the degree of disability the social domain. Figure 1 indicated that male students with mild disability suffered from social problems more than female students with mild disability. This might be due to the nature of the social activities, the interactive social level between the members of the society whether male or female. In addition, the type of the social activities performed by the handicapped would decide if the he would do or not. For example, traveling and social occasions might be obstacles for handicapped males only since the handicapped females would not participate in such occasions according to the customs of the Omani society.

The figure also indicated that handicapped females who had moderate disabilities faced more social problems than male counterparts. Generally, the difficulties the handicapped meet increased by the degree of disability, and the difficulties are connected with the nature of the disability itself, if the disability was visible and noticeable. Such situations would make the handicapped more embarrassed.

Added to this, when the female disabled students used the assistive tools, they would become embarrassed. This caused more social distance for them and forces them to keep themselves isolated.

In order to increase the social interaction between the normal students and the handicapped students, the researcher suggested that the university should present a course about the students with special needs as an obligatory course. Thus, the students would become more familiar with the abilities of their handicapped peers, develop positive attitudes towards them, modify some misconceptions about handicaps, and contribute to the future education of the society about the handicaps in order to create a civilized environment which accept the differences between each other and respect them.

## 6. Conclusion

The result of the study indicated there was a statistically significant difference among, the first domain, second and the fourth, and scored by the visually handicapped students. We conclude also there was no statistically significant difference due to the gender and degree of disability variables except the interaction between the gender and the degree of disability in the social domain.

## 7. Future Work

The researcher also recommended other researchers to study the counseling and psychological needs of the handicapped students, the relationship between their self esteem and academic achievement, and their psychological stability.

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# Indigenous Education in Comparative Perspective: Global Opportunities for Re-imagining Schools

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## Abstract

*Generally speaking, there are striking similarities between the histories and current realities of Indigenous peoples in Canada, the United States, Australia and New Zealand, the educational experiences of these four groups provide a particularly appropriate focus for comparative inquiry. This paper investigates the broad contours of policy discourse around Indigenous education in all four countries through an interrogation of official inquiries, reports and academic research. We then identify and assess the critical learning conditions and practices within schools and family/community settings, which are deemed most effective in enhancing educational outcomes for Indigenous students in local, national and global contexts.*

## 1. Introduction

The Indigenous peoples are among the most disadvantaged in terms of educational performance in all four jurisdictions, and closing the achievement gap between Indigenous and non-Indigenous students is an urgent priority. This transnational odyssey to achieve Indigenous educational parity is driven by a variety of motives, including the very significant implications of demographic trajectories for labor market participation, economic sustainability, and social cohesion.

Responding to the needs of Indigenous learners therefore presents one of the most compelling challenges to schools as they are currently constructed, while simultaneously offering the most exciting opportunities for reimagining how schools can better serve all learners in these four jurisdictions.

## 2. Theoretical and Conceptual Framework

A documentary inquiry focusing on official reports and academic and applied research on Indigenous education in the four countries, employing deductive, historical and discursive analysis, is our main method of data collection. Comparisons of student outcomes are based primarily on the results of international testing programs such as TIMSS and PISA. We

conceptualize the nature of policy development and change in Indigenous education by applying a multidisciplinary approach to social theory and critical race theory [17] to illuminate the complex interactions between Indigenous peoples and the nation states within which the dynamics of educational disadvantage operate.

## 3. Literature Review

Despite the striking parallels in the educational experiences of Indigenous peoples in these four countries, very little research of an explicitly comparative nature has actually been conducted. This limited transnational perspective is especially surprising given the fact that Indigenous peoples and educational establishments in all four jurisdictions are facing similar challenges. Cooke et al.'s survey of wellbeing identified gradual improvements in educational outcomes among Indigenous peoples in these four countries over the past decade but they noted that this progress did not keep pace with rising achievements among non-Indigenous people in Australia and New Zealand [14]. An overview of Australian, Canadian, and American policy concluded that Australia has "the worst Indigenous educational outcomes of any comparable Western settler society" [21]. Fitzgerald's comparison of Indigenous female school administrators in Canada, Australia and New Zealand identified an emerging global desire in postcolonial societies to devise ways that traditional Indigenous beliefs and values might inform models of school leadership and governance [19]. Hickling-Hudson and Ahlquist's comparison of curriculum in Australia and the U.S. suggested that practices dominated by the privileges of whiteness are still prevalent [26]. These studies, situated within a comparative framework, point to the benefits of researchers adopting a global perspective in response to local challenges and opportunities.

## 4. Contribution to Knowledge

The uniqueness and diversity of Indigenous groups mitigate against any simple application of global solutions to local circumstances. Nevertheless, it is evident that each country has much to learn from initiatives, both successful and unsuccessful, which have been developed in other jurisdictions. A logical approach would be to build on selected initiatives

which clearly are showing good results and extend them transnationally, and to abandon strategies, however attractive or expedient, which are proving unsuccessful. This would include the adoption of transformative models of school leadership; the provision of enhanced early learning opportunities and meaningful partnerships with parents; the delivery of culturally responsive instruction by culturally alike, “person centred” teachers; ensuring adequate time for learning; ensuring smaller class sizes catering to heterogeneous student groupings; and creating models of governance where Indigenous communities have meaningful control over their children’s education [15]. The findings of this research have global implications for policymakers, academic researchers, and classroom teachers involved in Indigenous education. We suggest that the search for improved Indigenous educational outcomes is an opportunity to fundamentally re-imagine how schools are constructed and operated and to reconfigure how schools relate to learners, their families, and their communities. It is evident that undertaking this transformation will require embracing substantially greater change than can be made comfortable or easily. However, in addition to pursuing an unequivocally moral purpose, we believe that the rewards in maximizing human potential and securing collective well being will be commensurate with the effort.

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# From Inclusion to Access: Paradigm Shifts in Special Education

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## Abstract

*From the Salamanca Statement in 1994 to the Dakar Framework in 2000 UNESCO has spearheaded an international movement for acceptance, equity, and access in the education of students with disabilities. Inclusion, mandated in Salamanca, is considered the first step. Today, the focus is upon the identification and implementation of educational models that ensure access. This article discusses paradigm shifts taking place in special education in US schools that respond to the ideals set forth in these statements: cultural competency, universal design for learning, and collaborative models of assessment and instruction. Practices discussed here can provide guidance for educators worldwide as they strive toward the goals of Salamanca and Dakar.*

## 1. Introduction

More than 600 million people worldwide have a disability. Although great strides have been made educationally to address the needs of individuals with disabilities, the benefits of these efforts have not been universal. Nearly two-thirds of individuals with disabilities live in developing countries and sustain themselves with less than \$1 per day. Ninety-eight percent of all students with disabilities lack access to primary education. They are socially, economically, and physically excluded and marginalized from mainstream society [9]. While some countries have evidenced a degree of success [4], the efforts of many have been fraught with economic, political, and social challenges [15]. In more developed countries, legislation and social policies have helped to remove many of the barriers to education and inclusion of all students. In the United States the disabilities rights movement has not only opened the school house door, it has begun a paradigm shift in the way that people think about disabilities. The demand for access and equity means changing the dispositions of society toward individuals with disabilities from the disability and limitation toward the person and possibilities. This new paradigm requires a reconceptualization of disabilities. The UNESCO World Conference on special education highlighted the importance of meeting the needs of all children in 1994. The Salamanca Statement is the

resulting commitment to individuals with disabilities and their educational rights. Ninety-four countries and twenty nongovernmental organizations worldwide adopted the statement.

In 2000, the Flagship World Education Forum in Dakar, coordinated by UNESCO, reaffirmed the mission of Salamanca by issuing the Dakar Framework for Action (DFA) so as to transform universal rights into educational reality. The goal of the Dakar Forum was to achieve education for all children by the year 2015 through various plans of action worldwide. Presently, these Flagship organizations are engaged in the development of national programs to improve the quality of teacher training and preparation, early childhood education, education in rural areas, and equity in education. The emphasis of initiatives is on removing the instructional barriers to learning, and to promoting a broader concept of education, which includes life skills, and learning across the life span.

## 2. Shifting Paradigms in Special Education

The United States can offer lessons in changing the paradigm in special education from recognizing the right to being included to offering educational equity and access. The move to include students with disabilities in the United States was initiated by several key legislative mandates including the Individuals with Disabilities Education Act (IDEA, formerly PL 94-142) and Section 504 of the Rehabilitation Act of 1973. From this beginning, an educational evolution has been underway with movement from a traditionally segregated system to one that is striving to meet the learning needs of all students. In the past, special education took place in a self-contained classroom. Today, the focus has changed from placement to service. Students with disabilities, to the greatest extent possible, are educated in the general education class with their typical peers, with the reauthorization of IDEA (1997) and in 2004 the Individuals with Disabilities Education Improvement Act (IDEIA).

## 3. Cultural Competence

According to the United States Office of Special Education Programs:

Cultural competence is defined as a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals and enables that system, agency, or those professionals to work effectively in cross-cultural situations [7]. Operationally defined, cultural competence is the integration and transformation of knowledge about individuals and groups of people into specific standards, policies, practices, and attitudes used in appropriate cultural settings to increase the quality of services; thereby producing better outcomes [2]. Examination of how society defines disabilities reveals the important role that culture plays in that process. The definition of what is “acceptable” and “deviant” intellectual and social functioning is determined by the majority population and emanates from the context of society [6]. Society’s influence on the definition of disabilities is best seen in light of Luckmann and Berger’s seminal work *The Social Construction of Reality* [10]: *A Treatise on the Sociology of the Creation of Knowledge*, which defines social construction as “a concept or practice which may appear to be natural and obvious to those who accept it, but in reality is an invention or of a particular culture...” When we look at the attitudes and beliefs about disabilities we can see how many notions result from popular ideas that are not necessarily true or accurate. As these concepts are repeatedly communicated throughout society, they become accepted as valid. Educators are greatly influenced by their current cultural environment and the one in which they grew up. Environmental conditions, many of which individuals have little or no ability to control, shape them. As much as teachers talk about how students’ behaviors are a result of cultural factors, so too are the behaviors of educators. The importance of social construction and the influence of culture in education require that educators develop cultural competence.

#### **4. Universal Design for Learning (UDL)**

Cultural competence is the first step in changing dispositions towards students with disabilities and serves as a bridge to inclusive practice. Universal Design for Learning promises to play a significant role in providing a framework for planning and implementing effective instruction for all learners. For students with disabilities the prominence of traditional, inflexible, one-size-fits-all curricula raises unintentional barriers to learning. One look at today’s classrooms highlights the fact that diversity is the norm, not the exception. When curricula are designed to meet the needs of the broad middle, at the exclusion of those with different abilities, learning styles, backgrounds, and even preferences, they fail to provide all individuals with fair and equal opportunities to learn. Learners with disabilities are most vulnerable to such barriers, but many students

without disabilities also find that curricula are poorly designed to meet their learning needs. In the United States, UDL is identified in the 2004 IDEA reauthorization and is defined in the Technology Act (1998) as: A concept or philosophy for designing and delivering products and services that are usable by people with the widest range of functional capabilities, which includes products and services that are directly usable (without requiring assistive technologies) and products and services that are made usable with assistive technologies [11]. In the inclusive education classroom UDL creates flexible curricula to ensure accessibility to the widest group of students possible, while increasing access to learning for all learners. Rose and Meyer [16] go on to explain the three principles of UDL: Principle 1: To support recognition learning, provide multiple flexible methods of presentation; Principle 2: To support strategic learning, provide multiple, flexible methods of expression and apprenticeship; Principle 3: To support affective learning, provide multiple, flexible options for engagement. The unifying thread that runs through the above principles is providing students different options in order to learn. While this removes barriers to learning for some students it gives typical students more and varied learning opportunities. UDL is compatible with modern pedagogical theories [13]. This approach to curriculum does not remove academic challenges [8]. It provides a wide range of “best practices” that can be used to facilitate the learning of all the students in the class [14].

#### **5. Collaborative Models for Instruction**

Collaborative instruction is one of the fastest growing and more effective means of instructional delivery of services for students with disabilities within the general education classroom. Two or more professionals provide instruction jointly to a diverse group of students who are in a single classroom space [5]. There are varied ways to carry out co-teaching [1]. Typically a general education teacher works alongside a special education teacher and share responsibility for planning and implementing intense and individualized instruction [3]. Five models of co-teaching, which offer flexible delivery of curriculum are:

- One teach, one observe or one assist: One teacher leads the lesson while the other observes the students, collecting data about their performance or assisting individuals as needed. Equitable teaching time for both teachers is a critical component. Both teachers should have opportunities to lead the lesson so that students understand both instructors have a legitimate role. Otherwise, the observant teacher may be perceived as an assistant.

- **Station Teaching:** The content of the curriculum is divided into stations and one teacher facilitates a portion of the lesson with one group while the other teacher(s) facilitates another portion of the lesson to the remainder of the class or another small group. The groups switch and each teacher then teaches their content lesson again. If more teachers are available additional stations can be formed.
- **Parallel Teaching:** Both teachers provide the same instruction with half the class. This enables students to work in a smaller group. Teachers can elect to use different instructional approaches giving students the opportunity to select the group that best suits their learning style with many more chances to participate in discussion.
- **Alternative Teaching:** One teacher conducts a lesson for most of the students in the class, while the other teacher works with a small group of students who need extra support or enrichment. Caution should be given to using small groupings for remediation only as it is contrary to the principles of inclusive teaching. Rather, groupings should consider student interests, motivation and engagement in order to expand learning.
- **Team Teaching:** Both teachers are equally engaged in class instruction, moving fluidly in and out of the lead role. Students benefit from this cohesive approach when two teachers are available simultaneously. This model of co-teaching requires professional compatibility. Successful team teaching encompasses a shared vision of the instructional process. The effectiveness of a co-teaching model depends upon the fidelity of delivery by each instructor and the strength of collaboration between professionals. When implemented effectively, each model may offer curriculum access for more students. These models of collaborative instruction represent recognition of the paradigm shift in special education inherent within inclusive education.

## 6. Conclusion

The educational rights of individuals with disabilities have been recognized throughout the world. The initial need for acceptance and inclusion has moved on to access, reform, and an examination of educational practices. This paper presents a number of ways that the goals of the Dakar Framework for Action (DFA) can be met. Nations worldwide are in accord and are committed to educating all children [12]. Educators in the United States see the global potential of the application of cultural competence, universal design for learning, and collaborative assessment and instruction. Not

only do these ideas begin to address the needs of students with disabilities, they facilitate the learning for all children. They represent a dramatic shift from inclusive education to educational access. The broad international strategy for global reform in education aligns with the practices discussed in this paper, and the changes underway in the United States. When comparing the goals of the Dakar Framework of 2000 with the Salamanca Statement of 1994 it is easy to see how the world community has moved beyond the basic idea of acceptance. The global challenge for educators is to establish viable ways to make the changes needed for accessible and equitable education for all.

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# Factors Affecting Passion towards Learning in Engineering Classrooms

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## Abstract

*The current trend of declining enrollment in engineering in the United States may be due, in part, to lower levels of interest in the profession as well as concern about course difficulty. By increasing the level of interest and actively engaging students in the classroom, students may ultimately develop passion towards engineering as both a subject matter and a profession. Passion for learning in the classroom may likely be fostered by a passionate professor, passionate classmates and delivery methods that address both the cognitive and affective domains of the learner. This study focuses on how the students' and professor's sense of passion affect individual students' overall academic performance. A pre-test and post-test, weekly surveys, and periodic classroom observation were used to measure levels of passion. Results suggest that student self-reported level of passion is variably linked to academic performance while professor level of passion is rated as somewhat or extremely important to student learning.*

## 1. Introduction

Becoming an engineer requires significant knowledge and skill. An urgent need for qualified engineers places pressure on educators to focus not only on students' academic success but on preparing professionals who will remain in the field. Reports indicating a serious decline in undergraduate enrollment in engineering [1, 2, 3] underscore the need for engineering education to focus attention toward not only what is taught, but how content is taught for the purposes of boosting student enrollment and retention in engineering programs, as well as to ensure adequate preparation for what is a demanding profession. While mastery of technical skills is essential to employability and competence, interest and satisfaction in the work may be what ultimately sustains a robust workforce.

Acknowledging that there are, indeed, levels of engagement that a student might experience, the following pyramid was constructed to characterize levels of distinction between disengagement and passion for learning. For purposes of this study, the researchers identified four levels of engagement during the learning process as shown in Figure 1. The lowest level of engagement characterizes those

students who are physically present in class but inattentive and not engaged. The next level of engagement describes those students who are paying attention but are not strongly engaged in the learning. The third level of engagement depicts those students who are actively engaged and display interest in the classroom discussion and activity. The fourth level characterizes those students who are passionate about the topic, class, and learning.

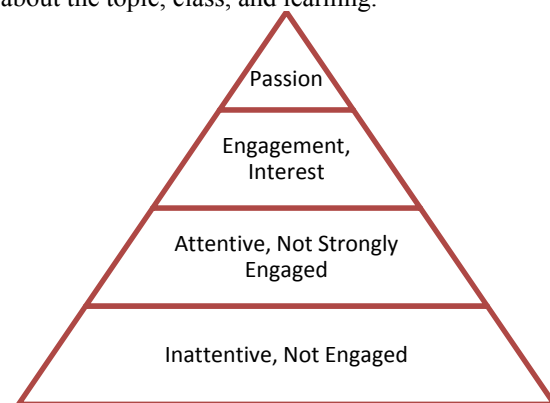


Figure 1. Levels of Engagement in the Classroom

## 2. Literature Review

While there are several bodies of literature that inform this study, the literature relevant to this paper includes that which addresses the roles of teacher and affect on learning.

In a special issue of *Educational Psychology Review* focused on the role of affect in learning, Ainley [7] draws on her robust research in the role of interest, engagement, motivation and affect on cognition to underscore that central to understanding education is the role of affect. Affective factors such as interest and motivation have been studied regarding their influence on student success in general [8, 9, and 10]. Interest has been shown to be related to attention but not necessarily to positive affect. Furthermore, interest has been defined as a situational and often fleeting emotion. With respect to learning of engineering and science in particular, Felder and Brent [11] highlight several models that converge on the notion that there are emotional and social influences on intellectual development in these particular content areas.

A study of the role of teacher interaction and feedback on student gains [4] demonstrated that while peer climate and instructor climate were not linked to student gains, instructor interaction and feedback were significantly associated with learning. In a study examining undergraduate views of excellence in engineering education [5], the effect of teacher was explored. This study pointed to students' expectation that professors "feel" the audience and convey excitement for the content. From the teachers' perspectives, more emphasis should be placed on cultivating student interest in *wanting* to learn [6].

### 3. Research Questions

This study was guided by the following four research questions: (1) to what extent does a student's sense of passion toward learning affect academic performance? (2) to what extent does the professor's passion for teaching affect student learning? (3) does students' perception of their professor's passion for teaching affect their learning? and (4) does students' perception of their classmate's passion for learning affect their individual level of passion for learning? While the design and data gathering focused on answering all four questions, this paper focuses specifically on the students' individual sense of passion and its link to academic performance.

### 4. Procedures

The classrooms studied included two sections of an introductory engineering course one taught to university students and the other taught to advanced high school juniors and seniors. The engineering professor in this study served as both participant and researcher. Given that the professor was examining his own teaching in relation to his students' sense of passion toward the class, all data gathered from students was done so by the co-researcher who was not involved in the teaching of the class. The co-researcher is an associate professor of education and, at the time of this research, served as director of the university's center for learning and teaching.

A pre-survey was administered in the first week of the semester. Weekly surveys were then administered for twelve consecutive weeks followed by a post-survey. Classroom observations were conducted twice during the semester by the co-researcher. At two points in mid-semester, weekly survey results were tabulated and provided to the professor along with results from the classroom observation. This mid-semester feedback was reported to the professor for the purpose of monitoring shifts or changes in students' sense of passion toward the content so the professor could, if

necessary, adjust his teaching to foster greater passion for engineering content.

Based on this mid-semester survey feedback along with the professor's reflection on his teaching, the use of an anticipation guide was introduced into the teaching. This instructional tool asks students to record predictions about content prior to learning for the purpose of inducing disequilibrium in the learner and subsequent deepened interest in the content. Though the anticipation guide was used only once, its effect of encouraging prediction and guessing – without penalty – was consistently evident to the co-researcher observer both in the professor's conducting of class discussion and the students' responses. The professor attributed his students' interest to their growing comfort in sharing their predictions without risk of their answers being wrong.

For purposes of examining change in student passion toward engineering, students were assigned a "passion disposition" based on responses to three items in the pre- and post-test. The first item was "What is your current interest in engineering?" with possible responses being (1) not very interested, (2) somewhat interested, (3) very interested, or (4) passionate. The second item was "In describing myself, I would say I am (1) not very passionate about anything, (2) somewhat passionate about most things, (3) passionate about most things, or (4) very passionate about everything. The third item was "How important is it to you that you are passionate about what you are learning?" with possible responses being (1) not important, (2) somewhat important, (3) it's nice but not necessary, or (4) I cannot learn if I am not passionate about what I am learning.

Based on responses to these three items, students were clustered into one of the following possible passion dispositions (PD):

- PD #1 Not very interested in engineering
- PD #2 Somewhat interested in engineering
- PD #3 Passionate about engineering
- PD #4 Passion unimportant
- PD #5 Not very passionate
- PD #6 Very passionate about engineering

Averages of student responses to weekly surveys were calculated for the three survey items that included self-rating of passion, student perception of classmates' passion, and student perception of professor's passion. Possible responses to the three items ranged from (1) not engaged, (2) paying attention but not particularly engaged, (3) engaged and somewhat interested, or (4) passionately interested and engaged.

Descriptive statistics were then run by disposition group comparing pre- to post- survey in order to analyze to what extent their passion disposition

remained stable or changed. In order to examine the effect of passion on academic performance, mean final exam score of each group was calculated and examined.

## 5. Results

In order to evaluate the overall change in passion, it is important to note how many students were categorized in each of the six passion dispositions. On the pre-survey, there were no students in Passion Disposition #1 or #3. In the high school setting, students fell into Passion Disposition #2, #5 or #6 on both pre- and post-surveys. In the university setting, students fell into Passion Disposition #2, #5 or #6 on the pre-survey. In the post-survey, the same dispositions were represented but some students fell into Passion Disposition #4.

**Table 1. Comparison of change in passion before and after the course**

Passion Disposition Group	High School Pre-Course Assessment	High School Post-Course Assessment	University Pre-Course Assessment	University Post-Course Assessment
Group 2	78% (15)	57.9% (11)	37.5% (13)	50% (16)
Group 5	10.5% (2)	26.3% (5)	31.2% (10)	28.6% (9)
Group 4	None	None	None	10.7% (4)
Group 6	10.5% (2)	15.8% (3)	31.2% (10)	10.6% (4)

Overall, there was very little change in passion disposition in the high school setting but notable change in the university setting, as seen in Table 1.

**Table 2. Final examination scores of students with different passion dispositions**

Passion Disposition Group	High School (Mean Scores)	High School (Std. Dev)	University (Mean Score)	University (Std. Dev)
Group 2	65.87	13.08	83	5.22
Group 5	81	16.97	75.30	20.41
Group 6	95	12.728	78.30	10.05

Analysis of academic performance measured using final examination scores reveals that overall, high school students performed better as shown in Table 2. High passion students (group 6) performed best with those somewhat passionate about engineering but not passionate about learning and other things scoring somewhat lower. Students who were somewhat passionate across the board scored lowest.

University students who were somewhat passionate (group 2) across the board scored highest. Those students highly passionate about engineering scored next highest. Students somewhat passionate about engineering but not passionate about learning, or in general, scored lowest. This group of students showed a lower level of interest towards overall learning, course material and instructions.

Before and after the course, students reported their professor's passion to be high or somewhat high. After the course, the importance of their professor's passion was considered somewhat to extremely important to their learning. Thirty-two percent of the students felt that a professor's level of passion is extremely important to learning and 66% felt it to be either somewhat or very important toward their learning as shown in Table 3. Therefore, it is evident that the professor's level of passion is very important to the learning environment.

**Table 3. Cross tab of professor's level of passion towards individual student learning**

		Professor's passion level (after)		Important to learning (after)		
		Some /very	Passionate	Not Important	Some /very	Extremely Important
Professor's passion level (before)	Some /very	0	1	N/A	N/A	N/A
	Passionate	10	36	N/A	N/A	N/A
Importance to learning (before)	Not Important	N/A	N/A	0	2	0
	Some /very	N/A	N/A	1	20	2
	Passionate	N/A	N/A	0	9	13

## 6. Discussion

This study presents results that will be discussed within a framework of student level of passion as measured during the semester and as it changed from beginning to end of semester. In examining students by passion disposition, there were no students who began or ended the class as either purely dispassionate or purely passionate about engineering, learning, or in general. All students fell into a disposition that categorized them as somewhat passionate about engineering, learning, or about things in general. Given that this course was not required outside the field of engineering, it is not surprising that no students reported being disinterested in engineering upon beginning the



course. Presumably, students enroll in the course because they have an interest in engineering or, at least, in learning more about it. What is surprising is that so few students reported being passionate about engineering upon beginning the course. Only two high school students and less than one-third of university students reported being passionate about engineering in the pre-course survey.

Students' academic performance was measured by grade on their final exam. Links between passion and academic performance were examined based on students' incoming passion disposition. Overall, students in the high school setting performed better academically than university students. In the high school setting, students who were highly passionate about engineering performed best (M=95) followed by those who were somewhat passionate about engineering but not passionate about learning and most other things (M=81). Those students who were somewhat passionate across the board (about engineering, learning and in general) performed the lowest (M=66). It would appear that passion toward engineering played a role in higher academic performance.

## 7. Conclusion

The study of teaching and learning pose increasingly sophisticated questions forging new territory. What used to be the study of content and technique alone, now consider the complex dynamic between cognition and affect. In this study, we argue that passion has a place in how we consider what it means to prepare a professional. As it relates to learning, passion can be considered on a continuum. While attention is a pre-requisite for learning, interest and engagement may not be as essential. One might pay attention to a lecture on thermodynamics but be disinterested in the subject. Engagement, which arguably goes beyond mere interest, creates yet a deeper relationship between learner and subject matter. Studies amply demonstrate the positive benefits of engaging students in learning. Taking engagement one step further, passion moves the learner to the deepest state of connection to a subject.

In this study, passion was not found to be a pre-requisite for learning. Yet, as the field of engineering education seeks to better understand how to most effectively educate its future professionals, learning of content may no longer be enough. Infusing *passion* for engineering may not only inspire students to learn, it will likely sustain them throughout their career.

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## **Session 2:        ICT Education**

Second Language Teaching in Virtual Worlds - The Case of European College Students under the Erasmus Programme  
(Paulo Frias, Ricardo Cruz, Ricardo Fernandes)

Teacher Support in a Research Circle when Introducing Smart Boards  
(Martin Stigmar)

Programme Transfer of Innovation Project: “MLARG – Mobile Learning for the Young People at Risk Groups”  
(Yasemin Bayyurt)

A Case Study on Tomorrow’s Smart Classroom: The Greek Paradigm  
(Fragkiskos Foskolos, Aristides Vagelatos, Theodoros Komninos)

# Second Language Teaching in Virtual Worlds: The Case of European College Students under the Erasmus Programme

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## Abstract

*This project is a proposal for a case study that aims to describe and understand communicative and pedagogical processes involved in Second Life® in a context of second language learning and teaching interaction, by modeling in world lessons of Portuguese as a second language for Erasmus students. The purpose is to understand how an immersive context stimulates learning by evolving students in a virtual reality situation where real life language context situations are provoked and where 'not possible in real life' learning routines happen. This will experiment the advantages of this platform compared to real life teaching and learning contexts, as it allows a synchronous and simultaneous use of voice and text both by teacher and students.*

## 1. Introduction

The Erasmus<sup>1</sup> Programme was established in 1987. It is a mobility programme between universities of member states of the European Union and also of other associated states, that involves students and teachers, and allows the former to study in another country for 3, 6 or 12 months.

The main goal of the Erasmus Programme is to encourage and support students and teachers' academic mobility inside the European Union, and other European countries such as Norway, Iceland, Turkey or Liechtenstein.

In all countries, some language tuition is provided to help students to integrate. However, some students complain of high workloads combined with difficulties with language comprehension.

Virtual worlds are a mean to promote a new level of teaching and learning experiences. Second Life® is a 3D virtual world with a universe of potential tools that fit in the e-learning universe. Considering the premise associated with the concept of the Erasmus student, he or she can engage in an

efficient and innovating way of learning a foreign language and solve one of his or hers major difficulties: communication.

Pedagogical experiences have been made in virtual worlds, more specifically in the 3D virtual world on-line – Second Life® – that invoke attention for the greatness of the «learning space». The students' degree of attachment and immersion with the courses content, class mates and even the teacher himself or herself, in an environment of 3D virtual reality such as SL® doesn't seem to be easily reproduced in the traditional learning environment, such as Blackboard, Teleduc, Moodle, etc. [12].

Education in virtual worlds is dependent of the way in which users interact with each other.

In spite of the limitations known to this platform, the technical requirements for this e-learning project would assure that the limits on bandwidth and avatars could be handled by keeping the environment simple, and leaving out most construction other than what is needed to teach the course effectively [13].

In the Erasmus programme, students need to be exposed to the language of the foreign country before their period of study abroad. This takes time and effort for languages that are recognized to be difficult. Proficiency in a foreign language can explain the difference between moving students and non-moving students. Students will accept very easily to learn English and probably other widely spoken languages but they will be more reluctant to learn other languages unless they are motivated by specific reasons [5]. SL® may permit an immersion experience, and keep students motivated and focused to learn a foreign language. In this proposed study, our focus group is the Erasmus students who come to Portugal for studying.

## 2. Research Rationale

The goal of this proposal is to understand communicational processes in Second Life® in a context of second language learning aimed at Erasmus students. This will be achieved by the conception and application of a specific number of activities with a focus group of students. The learning language (L2) is Portuguese. This experiment should contribute to the explanation of how Second Life®, as a virtual reality immersive

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<sup>1</sup> The programme is named after the dutch philosopher Desiderius Erasmus of Rotterdam, know as an opponent of dogmatism, who lived and worked in many places in Europe to expand his knowledge and gain new insights. Later, it was given the backronym *European Scheme for the Mobility for University Students*.

tool, empowers the teaching and learning of a second language. This may occur due to two main reasons. On the one hand, the distance effect present in traditional e-learning tools such as *Moodle* or *Joomla* is eliminated. Distance learning becomes much more feasible when students from around the world can log in and interact as if they were next to each other [7]. On the other hand, the use of this platform suggests the reformulation of the teaching and learning paradigm. The educational experiences of virtual worlds do not exist inherently within these worlds but rather within the ways in which the users engage their ideas within these worlds. Therefore, the curricula of virtual worlds includes what happens as well as when, how, with whom, and why [2].

### 3. Sociological Perspective in Virtual Worlds

How can social sciences think about virtual worlds, and other environments that deal with information and communication?

In a particular way, the interfaces of virtual worlds re-use the concepts of mind, body, projection and cognition.

Virtual worlds like SL<sup>®</sup> have the specific features that enable connections between ideas and images, transforming them in digital concepts. To put in other words, digital concepts are terms more appropriated to understand the reality of virtual worlds.

We think that the usual or even daily use of SL<sup>®</sup> starts a new era of knowledge standards.

A phenomenological interpretation of the social concept could provide a new analysis about virtual worlds, based on social relationships [14]. That is, we only understand, in a efficient way, what we experiment, in our daily routines, on our social life. The concept of "areas of limited meaning" is the mirror of the meaningful situations on our societal relationships. This concept can also help the virtual worlds analysis. In these virtual worlds, the avatars are a new type of social agents. As a matter of fact, each group of avatars have their own knowledge and experience, not necessarily coincident with the practices and knowledge of other virtual characters who have chosen other means of daily immersion in the metaverse. There are many worlds of digital experience, not just a "second life", because, in the metaverse, there is not just a second way. So, the SL<sup>®</sup> should be nicknamed as "multiple life", because there are multiple ways that a single person could create a virtual character [14].

More specifically, the social agents can communicate with each other through the interactions between individuals (e.g. a conversation) and from corresponding mutual interpretation, within a society or culture. This process settles on the "typified", that is, categories created and operated in

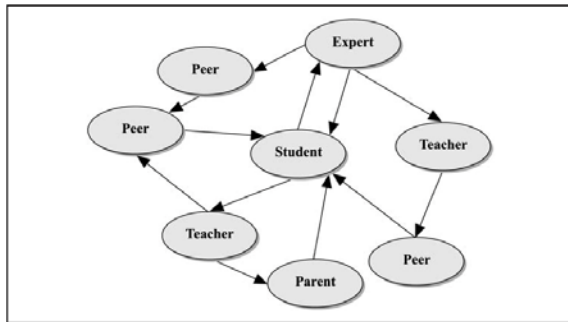
the practices of everyday life, with common meaning and socially shared, understood by members or, more specifically, the "collective common sense" in a particular social framework. In SL<sup>®</sup> case, we can think of virtual typifications, adequate to this space, virtual society, or culture, understood in the articulation of life worlds more circumscribed, each one of them enclosed in a "area of limited meaning".

### 4. Language Learning

Second language acquisition may be a challenging task, specially for young adults. It requires the repetition of communicative meaningful interactions with balanced input and output situations, so that the learner may acquire as much language functions, vocabulary, syntax, and grammar in context as possible. The most effective process to achieve this is by providing a learning objective in different contexts, especially through a task-based approach. One way of targeting this is by the use of simulations, because they provide learning by doing routine, which replicates elements of the real situation and put the learner in the center of the process [3]. A problem-based scenario approach is also a good process to deal with the technological limitations that students may have with the interface, since it is possible to organize activities for the first sessions that ease the difficulties associated with the immersive experience [1]. The three-dimensionality that a virtual world enables promotes the sense of presence and interactiveness, which facilitates the learning experience, compared to other non-immersive e-learning routines [8]. An experiential simulation such as this virtual environment provides the basis for empathic understanding, facilitating collaboration and reducing the affective filter caused by the negative emotional responses of the learner when exposed to a foreign language [8].

It is possible to apply different learning strategies considering the versatility of this environment [11]: learning by exploring, such as in the exploration of the avatar, the surroundings, the buildings and the installations of the virtual world. Learning by collaboration, which occurs when students work together on a problem-solving task, providing a context to use the language. Learning by being, when role-plays, which are a common activity in second language learning, take place in holodecks. This reduces the limitations inherent to the activity by providing a more realistic environment for the role-play, though, paradoxically, a virtual one. This aspect is connected to the necessity of taking into account the cultural background of the learner. The different socialization patterns, the loss of identity and the isolation due to the language barrier can be also addressed in this environment. Colors, shapes and symbols may have a different cultural meaning [2]. All these situations may be anticipated and dealt

with easily in this platform. The theoretical context for this study is based on constructivism, a cognitive approach, the multiple intelligences theory and communicative skills.



**Figure 1. The communication model of the virtual world**

This multi-directional communication model is the framework where these theories are applied, in the virtual world. The teacher becomes a facilitator, integrating tools into the teaching process and assisting students in the tasks [4]. The Figure 1 illustrates the communication model that the virtual world follows.

## 5. Engagements

The use of this platform allows the use of voice streams by the teacher and the students in a regular interaction. But, while the teacher speaks, he or she may write some of the structures used, to facilitate the understanding. This will provide two simultaneous language inputs for students: listening and reading. A simultaneous automatic chat translator may also be used by the teacher, which may be useful in a vocabulary input activity. English may be used as the working language between L1 and L2. Another possibility would be for students to ask questions through text while the teacher uses voice. The dialogs between the teacher and the students -role played or spontaneous - may be recorded and analyzed in a ulterior moment. Students and teacher may listen to the dialogues and the teacher may comment on the structures, providing hints, and giving positive feedback. The platform also allows the distribution of handouts in the form of personal notecards as well as billboards. The role plays and the use of holodecks where similar to real life context is given allow the students to assume social roles where the L2 is needed. This would be very difficult to achieve in a traditional classroom. Students are not passive receivers of information but they actively build the language structures as needed. These role plays are used according to the students' needs during they staying in the country: shopping in the city, public offices attendance, a visit to the

hospital or health centre, night life, museums, a bank and other social contexts where L2 is needed with specific functions, collocations and vocabulary [13].

## 6. Discussion

SL<sup>®</sup> is a tool with a unique potential to create learning communities, different from traditional, asynchronous tools, which are mainstream in the e-learning context.

There are some advantages related with the use of SL<sup>®</sup> as a social learning tool in virtual classrooms.

First of all, this e-learning technology can reduce costs, compared to the traditional classroom systems, and also eliminates students' transportation costs.

This tool also stimulates the diversification and increases the courses offered. Besides, it's an opportunity for promoting education adapted to current demands.

The students can have formation outside the classroom context and they are able to stay on their professional, cultural or family environment. Concomitantly, there are no restricted rules as far as space, class attendance, time and rhythm requirements. The constant bidirectional or multidirectional communication flow ensures a dynamic and active learning of the subjects. As the teacher prepares each activity thoroughly, he or she has the chance to prepare activities which promote cultural stress free contexts. Furthermore, the student adopts a pro-active attitude towards learning.

There are disadvantages that this model has and that have to be taken into consideration too. Personal interaction of the students among themselves and the teacher may be scarce if the use of voice is limited by bandwidth restrictions or by other reason. Also, some individuals may feel uncomfortable with the absence of real life interaction. Besides, the personal educational relationship between the teacher and the student is absent, which diminishes the direct exchange of experiences. For the teacher, this model demands a rigorous planning, since there are more variables that may interfere with the activities. The homogeneity of the materials and the difficulty of developing individual teacher to student routines should be taken into consideration too. Then, there is the learning curve associated with the platform. If students are not learned with the application, the first inworld experiences may be focused on the creation of a personal identify. Students will pay attention to changing their clothes and their appearance until they start to identify with their avatar. Besides, these stage is dedicated to learn how to interact with the environment: how to move, how to use the camera and how to interact with text and voice. Other technical problems are related with the bandwidth necessary to take full advantage of the experience. When virtual worlds are extensively and intensively used in a computer lab, lag time will degrade the

experience. Besides, many universities have firewall that prevents access to virtual worlds [4]. Furthermore, there is a limitation of the number of avatars and items that can concur in the same virtual place, above which the rendering becomes increasingly slow and the platform unusable. This means that the number of students is limited and the objects, buildings and all items that constitute the environment should be minimal and not too elaborated. Finally, students enrollment has to be dealt with. In this study, it means that universities across Europe must be contacted and many administrative steps must be taken before the model can be applied, if this course were to be implemented in a large scale

With respect to the compatibility of virtual environments to existing learning styles, we believe that today's virtual worlds have multiple channels that favour the learning styles of the newest generation [9].

Virtual worlds are different from other media used for virtual team collaboration due to the conveyance of visual, aural, and spatial cues. Since communicators using a virtual world need to be present at the same time, virtual worlds also differ in terms of the interactivity and the preparation of the messages that individuals produce. For instance, collaborators using the voice channel in a virtual world have a very limited ability to rehearse their messages before transmitting them [10][6]. This provides a spontaneous communicative environment which means, in other words, true language use in context.

## 7. Conclusion

Virtual presence reduces apprehension and embarrassment, diminishing, this way, the affective filter. Moreover, virtual worlds persistence, that is, the fact that the environments and objects do not disappear between sessions, provide learners with authentic learning materials. This tool provides simultaneous physical virtual presence and linguistic presence. The different learning styles are contemplated, with the advantage that information is mediated by the virtual world. Learners do not feel overwhelmed by the excess of uncontrolled information sometimes present in the physical world. Virtual worlds provide a contextually rich environment, acting as a important cognitive aid to text and voiced based interactions.

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# Teacher Support in a Research Circle when Introducing Smart Boards

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## Abstract

*This paper reports on a case study, in form of a Research circle, of one compulsory school and highlights how teachers can be supported during the introduction of Smart boards. The research question addressed is how teachers and researchers can collaborate in order to assist the introduction of Smart boards. Seven two and a half-hour-meetings, were completed during two semesters. Participants in the Research circle were five teachers representing different subjects and grades, the principal of the school and one educational researcher from a university. All meetings were documented on film. Data was also collected through questionnaires to the participants and a follow-up group interview. The results emphasize the importance of letting circle participants: formulate their demands and goals during a long period of time, document their teaching philosophy, be introduced to different techniques for data collection, benefit from researchers knowledge of scientific work and documentation.*

## 1. Introduction

In the spring of 2008, a compulsory school for children aged 7-16 with 55 teachers, in an urban setting in Sweden, provided their school with 33 interactive digital whiteboards (IWB:s), Smart boards. Now that the Smart boards had been invested in and installed in the classrooms, an overarching question was raised, namely how to make optimal use of Smart boards in order to inspire pupil motivation and organize educational settings? What was really in focus was a shift from ICT skills to ICT competency, i.e. a shift from a teacher's ability to switch on a Smart Board to the teacher's ability to appropriately apply those skills in their teaching environment to enhance the actual quality of their lessons [1]. What potential benefits and drawbacks can be identified? According to Dakich [2] the potential of new technologies is harnessed by teacher's lack of confidence and understanding (see also [3]). So far most reports show only mixed, limited, or anecdotal support for the benefits of IWB:s [4].

In order to answer these questions an educational researcher from a university with a focus on learning and ICT was contacted.

The aim of the present paper is to report on a case study, i.e. a Research circle, of one

compulsory school with focus on how teachers can be supported during the introduction of Smart boards. The research question addressed was: How can teachers and researchers collaborate in order to assist the introduction of Smart boards?

This paper provides the opportunity to explore what crucial components need to be identified to facilitate for teachers in their pedagogical advancement in their practice with Smart boards. It is important to clarify that this paper focuses the collaboration between a university researcher holding a doctoral degree in education science (pedagogy), and five teachers and their principle at a compulsory school and the research circle refers to this collaborative work.

The *project* on the other hand, refers to what the teachers, i.e. the circle participants, actually plan to accomplish with their pupils and is thus in the background in this paper.

## 2. Research circles as method

In order to find answers of how to identify effective and inspiring utilization of Smart boards, research circles were considered for data collection. Research circles are included in the participatory action research tradition, based on the principal that the focus for a circle is decided by its members [5]. The purpose of a Research circle is not primarily to solve a problem, but rather to present different perspectives on a problem in a wide-ranging way and thus put forward a solid ground for future action. Research circles frequently investigate how teachers can improve their work and in focus is knowledge-production, in which both theory and practice are equally important and necessary. During work, the participants in a circle not only draw on their own knowledge and experience, but also benefit from a researcher's competence to systematize studies and to analyze collected data. Research circles thus serve a role to bridge the gap between the practical day-to-day school work with university teachers performing research, (ibid) and offer teamwork with equivalent collaborators. Theory and practice are mutually supportive in a reinforcing process and progress can be made only if both sides of the coin in terms of know-that (facts) and know-how (experience) are developed and appreciated [6]. One fundamental idea for the Research circle is that there are no predetermined criteria, but notes are continuously taken and eventually published in a report.

Seven two and a half-hour-meetings, with intermediate participant assignments, were completed during two semesters. Participants in the Research circle were: five teachers representing different subjects and grades, the principal of the school and one educational researcher from a university. All meetings were documented on film and carried out at the compulsory school where the teachers were employed.

The outcome of the Research circle is also documented through questionnaires to the participants and a follow-up group interview.

### 3. Theoretical framework

The participants of the Research circle were neither to expect to gain access to a pre-defined pedagogical toolbox containing immense numbers of practical teaching tips of how to use Smart boards, nor to reveal the yet undiscovered best way of teaching with Smart boards. The Research circle is an attempt to connect teachers' practical experience with researchers' theoretical training. Neither theory nor practice alone is sufficient for teachers in compulsory schools who wish to improve teaching and learning environments with digital writing boards. A rather different standpoint, than to dualistically separate theory from practice, is to acknowledge the mutual value of both theory and practice and view them as interwoven.

During the first Research circle meeting, we discussed and settled that the goal was to stimulate reflection on theory as well as practice and maintaining an explorative stance as of what the participants sought to examine during our meetings. We also discussed how complicated it is to decide and agree upon what is best practice in a given pedagogical situation. For that reason, it is neither achievable nor functional to try to determine an all-purpose usage of pedagogical theories or the use of Smart boards in classrooms regardless of the learning context (eg subject matter, age, prerequisites etc.) [7].

As a consequence, an initial assignment for each member was to individually put into words why they participated in the circle, what intentions they had, how they would like to organize future meetings, had they identified literature which needed to be read or suggestions for study visits? An additional assignment for the second meeting was for the participants to portray their teaching philosophy. Typically included in a teaching philosophy is the: conception of knowledge, perception of learning, relationship between teacher and student and goals of teaching [8].

Anticipated to be included in the portrayal by the circle participants, was: i) *epistemological approach*, e.g. what is knowledge, how do we obtain new knowledge, what is belief and what is facts, ii) *ethical approach*, what values are your

teaching based on, what's good what's bad, what explicit or implicit values are integrated in the pedagogical setting, iii) *human dignity approach*, how do you as a teacher understand pupils/course participants, are they active or passive, responsible or irresponsible, what does it take to motivate learners, iv) *view of society*, how is education related to society, is education expected to adjust to society or to contribute to the change of society, or is education an individual concern, v) *pedagogical setting*, who is the central actor in a teaching and learning situation, the teacher or the learner, or both?

Next step in the process was to analyze the assembled data, i.e. the teacher philosophies, and search for shared goals and amongst the participants in the Research circle. Would the teachers in the circle compose themselves on one mutual project goal or would different goals crystallize?

### 4. Pedagogical approach and preliminary project focus

As a preparation preceding the second meeting, I as a project leader and researcher, read through the individual assignments, i.e. the teacher philosophies and their suggestions for focus of the project. The strategy to let teachers expose their fundamental ideas on teaching and learning find support in Martin [9]:

- This suggests that the crucial component in the use of ICT within education is the teachers and their pedagogical approaches [9], and

We need to have a clear idea of what we are trying to teach our children before we enlist the help of any technological support [9].

During the analysis of the participants' assignments, I strived to discover shared patterns and opinions. One mutual view that became apparent was that the circle was not to become yet another study of what medium is the most superior, i.e. the focus was not to describe how superior IWB:s are to other media. Earlier research by e.g. Clark [10] and Kozma [11] clearly show the difficulties accompanied to trying to establish universal proclamations on the relationship between media and learning. More recent research in specific connection to IWB:s (see eg [12]; [13]; [9]; [14]) confirm the difficulties identified by Clark and Kozma. It is difficult, if at all possible, to show significant general improvements in describing learning as a result of a specific medium. As a consequence, future research should focus on something else than trying to uncover the effect of a certain medium.

Alternative focal points for the Research circle, suggested by the participants were to discover: what benefits or disadvantages for teaching and learning are offered by Smart boards, what needs to be changed in order to promote student learning



progress, document how teachers can use IWB:s in a pedagogically effective way in order to stimulate interactivity, how teachers stimulate students to learn how to learn (i.e. metacognitive skills, see e.g. [15]; [16]; [17]; [18] through the use of Smart Boards:

*Whereas the object of cognitive activity is a problem, datum, or suchlike, that of metacognitive activity is the cognitive process itself, not the object of that process.*  
[19]

In the teachers' philosophies there was a mutual wish expressed to: arrange meaningful and stimulating learning environments in which students collect and analyze information, consider the context of learning in regard to students, the development of the subject matter, promote interaction and stimulate life long learning.

Based on the analysis of the teacher philosophies, a preliminary focus for the project was formulated, namely: To investigate how teachers in junior- and senior school can use IWB:s in an effective way in different subjects.

## 5. Consolidation

The circle participants agreed to as a point of departure make use of curriculum, syllabus, and local steering documents. It was also decided that all members of the circle were to continuously document their reading, i.e. references and quotations of interest. There was a strong determination to document and spread the results of the circle to other schools. Accordingly the documentation of the work was decided to be a collective responsibility.

The time had now come to start discussing different ways of collecting data, and it was agreed to use teacher questionnaires in order to find out how the teachers on the school relate to Smart boards. Above this, pupils were to be interviewed on how they understand their learning with Smart boards. Every circle member was also going to make classroom-observations. Thus multiple methods, i.e. data triangulation, were used to study the same case, similar methodological approaches have been used in previous research in connection to IWB:s, [1]; [20]. Before settling on how to structure questionnaires and interview guides in detail in order to gather data from colleagues and pupils within the project, some members of the circle studied literature on these techniques, with the support of the researcher.

After the participants had examined previous research in the field of IWB:s they were of the opinion that the preliminary focus: "To investigate how teachers in junior- and senior school can use IWB:s in an effective way in different subjects",

was incomplete and unsatisfactory. Consequently they decided to revise the project focus and include three vital parts, i.e. to portray: i) the process, ii) difficulties and iii) instructive didactic examples. The revised focus for the project was: *To document the process of introducing IWB:s in a compulsory school and portray potential difficulties and didactic examples.* Data were collected through questionnaires, teacher interviews and pupil interviews. When it came to the actual documentation of the project the teachers turned out to be rather inexperienced. Thus the researcher had a central role in supporting this phase.

## 6. Result

There are several lessons learned and a number of implications for practice arise from the results of the Research circle presented in this article. To begin with I would like to remind the reader of the aim of the Research circle, namely to report on a case study of one compulsory school with focus on how teachers can be supported during the introduction of Smart boards, the question was how teachers and researchers can collaborate in order to assist the introduction of Smart boards?

The participants in the Research Circle individually answered the following questions in a questionnaire: *how would you describe the collaboration between you as a circle participant and the researcher, what has been valuable support in your introduction of Smart boards, what could be done differently?* A follow-up group interview was held based on the outcome of the questionnaires.

All participants expressed the importance for the researcher to have a purposeful approach for all meetings, to lead the circle forward and to summarize the discussions. The participants also stress the value of high-quality synchronous communication during meetings as well as asynchronous through e-mail and wiki. The researcher is expected to give structure to the circle e.g. presenting a clear agenda for the meeting and to spell out the main theme. All members are responsible for contributing to an open-minded atmosphere where critical and unconventional perspectives are accepted. Challenging questions prevent one from committing to a narrow-minded standpoint.

When it comes to what has been valuable, the participants primarily stress the significance of receiving assistance in finding relevant research articles which have been discussed during the meetings. Taking part of international research gives beneficial input to the introduction of new technology. Teachers rarely have time for reflection-in-practice and thus need support to organize moments for contemplation. The researcher as external has the opportunity to deepen the perspective of the school everyday practice and

like so offer alternative ways for action when implementing Smart boards. In the questionnaires is also expressed the approval of the researcher bringing theory and practice together.

The participants answers on what could have been organized differently, concerns expectations, i.e. increased transparency about the case study as a whole, e.g. aim, different roles, methods for compiling data etc. Regardless of how much information is given prior to a Research circle, there will be misinterpretations in several aspects. One example of such a misunderstanding was about who was going to document what and why during the course of the circle, were the participants expected to generate written text, another obscurity was about why the project aim was not fixed swiftly at the very beginning of the circle. The long drawn-out process of formulating a project aim caused unnecessary frustration. It was also suggested to previous to the start of the circle, make clear the working conditions for the participants, e.g. would there be any compensation time-wise or economically, and was work in-between-meetings anticipated.

## 7. Conclusions

The following findings emphasize crucial components for collaboration between teachers and researchers when introducing Smart boards:

1. *Allow the process of formulating an aim for the Research circle to be lengthy and time-consuming.* The process of pedagogical development is a slow and consistent activity based on setting small steps of change. Thus it is reasonable to let participants formulate their demands and goals during a rather long period of time [21]. However, it is imperative that the participants are well informed about why this process is long drawn-out.
  2. *Document the teaching philosophy.* Provide support for circle participants when they formulate statements about what characterizes teachers that demonstrate good teaching skills.
  3. *Introduce different techniques for collecting data.* Present circle participants to a wide range of methods for documentation, such as interviews, questionnaires, observations, and video/audio. The researcher actively supports the participants during the collection and analysis of data.
  4. *Benefit from previous research.* A principal assignment for the researcher is to present previous research to the participants of the circle. The collaboration can be based on the researchers own experience and knowledge, but the participants also need help in undertaking searches in databases and comprehensible reading recommendations.
5. *Documentation.* Frequently circle participants are unfamiliar to the systematic way of documenting and presenting science in writing. Consequently, it is important that the researcher assist circle participants with advice in documenting and publishing the findings.

To sum up: supporting teachers in introducing Smart Boards is a delicate act of balance. Preserving quality, while piloting teachers into performing science and at the same time challenge everyday based-teacher-practice, is to a large extent a matter of establishing effective communication and the exchange of ideas between circle participants and the researcher, i.e. to merge practice and theory.

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# Programme Transfer of Innovation Project: “MLARG – Mobile Learning for the Young People at Risk Groups”

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## Abstract

*Mobile technologies have been implemented in many fields. Recently, applications of mobile technologies have become a main area of interest and research in education. The paper focuses on the “Programme Transfer of Innovation Project”. This project is based on the Mobile Learning for the Young People at Risk Groups (MLARG), which was proposed to implement mobile technologies in developing language skills competencies and to ensure the transfer of implementation to the field of lifelong learning.*

## 1. Introduction

“MLARG-Mobile Learning for the young people at risk groups” is about the use and adaptation of mobile technology in language learning. It highlights the competencies and qualifications of young people at risk groups, and aims to integrate them to social and business activities. By creating an integrative and inclusive approach to support young people in risk groups, the project also combats the discrimination across young population. This project aims to raise the competence level of the participants of the study – i.e., infrastructures for mobile learning technologies will be developed and used and the competence level of participants will be revealed. The project will begin on the 1 November 2009 and finish on the 31 October 2011.

The MLARG is designed for young people who are referred to as less advantage in terms of their socioeconomic status and equal access to educational resources (e.g., course books, language learning software programs, videos, and computers). Therefore, it is not only innovative in terms of the use of language learning technologies, but also inclusive as it takes into consideration the needs of young people at risk groups. The purpose of providing such risk groups with mobile learning (m-learning) facilities is to create a new learning environment for them and to better the quality of their social and economic life. The project is in two stages:

- First stage: mobile infrastructures, the content and methodology for mobile language learning are created.
- Second stage: designed content with the built-up system is implemented. At the end of the implementation process, the methodology and the content developed for mobile language learning and mobile learning infrastructures will be the major outcomes of the project.

The three European partners involved in this project are Italy, Slovakia and Czech Republic. The partners will work in a cooperative way to analyze the needs of the young people at risk groups, and to develop e-learning materials and methodologies for mobile technologies.

## 2. Why is this project important and necessary?

The major reason to adapt mobile learning for young people at risk groups is that mobile learning allows “anywhere”, “anytime” and “personalized” learning for everyone. For the target group in the present project, it is considered that using “anytime and anyplace” will give young people at risk groups a strong feeling of being taken care of, valued, and included in the society. The mobile medium of education will provide the target group with courses not in a fixed place or time but anytime and anyplace whenever they want. This allows them to personalize their way of learning. Without doubt the MLARG will:

- enhance language skills through new learning platforms;
- develop methodology for mobile language learning;
- develop needs analysis and strategies to expand the use of technology in language learning,
- provide risk groups with lifelong learning opportunities;
- give risk groups an access to the innovative technological implementation;
- exploit emerging technologies to develop adaptability to new learning situations;
- promote the contributions of young people in social interaction and harmony;

- combat with discrimination and unequal situations when adapting mobile technologies to language learning;
- improve skills and competencies of risk groups for personal and vocational development;
- facilitate the integration of young people at risk groups to national and international labour market.

In an already completed Leonardo da Vinci (LdV) project on mobile learning contracted by Erickson from Finland, it is reported and suggested that there is a need to adapt mobile devices to education and enhance learning environments. In the present project, these remarks are taken into account and outlined by taking into consideration the needs of young people at risk groups. The aim is to provide the content not in a fixed environment but in various possible environments such as PDAs, Cascading Style Sheets and Small Screen Rendering (SSR). In addition to enhancing learning environments with flexible tools, mobile learning also helps to raise its users' self-esteem and confidence [1]. These are very important points when risk groups are considered.

### 3. Type of transfer

The transferred project is about creation of the Integrated Virtual Training/Consultancy System based on application of up-to date Information and Communication (ICOTEL ref no: SK/02/B/F/PP/-142261). The outcomes of the project are training modules so as to increase the level of knowledge of ICT use in selected areas. The present proposal transfer the working methodology of the project ICOTEL, that is, designing needs analysis and providing training and diagnosing the problems in providing virtual modules. The ICOTEL mainly is based on e-learning platforms. However, understanding e-learning platforms will help to design IT and mobile technologies for different scenario and content creation. The result of project is expected to create potentials and necessary infrastructures in a different geography, in the candidate country for EU membership. The other perspective is the technological one as the transfer will highlight the transfer of developing modules with ICT to the mobile technologies.

The rationale behind the choosing ICOTEL project is to find out whether ICT is a starting point in developing content for training via mobile learning. In ICT applications, the content is virtual training modules (See the printed version of the content outline). Another reason to base on the project about ICT training modules is to adapt the technological infrastructures to the newly emerging applications such as mobile phones or blogs. Therefore, the continuum of the project life will be ensured by transferring ICT platforms, infrastructure

and content to mobile learning. The project proposed will use the methodology of creating the training modules in the format of mini-course, and present if there is a real difference in terms of methodology of creating content built in ICT or mobile technologies.

The working plan of the ICOTEL project will help to outline the needs analysis plan, implementation phases and presenting the methodology of mobile language learning. The added value of the project is that the platform of mobile technologies and content will be compared to the ICT platforms and content. This will result in two contributions: the transfer of the platform to provide virtual training and development of methodology for mobile language learning.

### 4. Conclusion

The mobile technologies have become major digital tools of communication and information technologies taking place of PCs day by day [2]. One of the indications of this fact is the significant increase in the number of mobile phone subscribers. In the present project, mobile technology is taken into account and designed as a medium of language learning for young people (between 16 to 24 years old) who are beyond the age of compulsory education. In this study, mobile technology is chosen as a medium to implement the project as there are studies and reports that indicate its benefits. On the basis of the results of an EU-granted project, Atwell found that mobile learning helps learners to develop positive attitudes towards literacy both in school subjects and technology [1]. It also motivates learners to take part in activities in mobile medium of communication as it brings attractiveness through multimedia tools (mediaBoard), portal page, clips and so forth. The mobile learning can contribute to attract the young people to learn, maintaining their interest and support their learning and development.

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# A Case Study on Tomorrow's Smart Classroom: The Greek Paradigm

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## Abstract

*In this paper we are going to provide a glimpse of the future of the Lower Secondary (Gymnasio) schools of Greece, thus the attempt of applying broad use of ICT in the classroom and the issues and constraints that this attempt poses to the educational system, the teachers and the students in the overall. The Greek Ministry of Education, Lifelong Learning and Religious Affairs, decided that the time for a broader use of ICT in the Greek educational system has come, and the appropriate first step for this implementation was Gymnasio. In the following we describe the various steps that have already or will be implemented as well as the realization of a master plan that would evaluate all aspects and provide a blueprint for the entire implementation.*

## 1. Introduction

Today almost all Secondary Education schools in Greece have at least one traditional Computer Lab. That is a special classroom separated from all the others were, mainly, a number of old PC's plays the role of workstations. In spite the fact that there are software applications for the support of the teaching of a number of curricula (like history, geography, etc), the computers in the Computer Lab are mainly used for the sole purpose of teaching Informatics.

The situation was totally changed in the fall of year 2009 when the introduction of the "1-1" computer model (one laptop per pupil) took place. That time more than 126.000 netbooks have been distributed to all first year students of the Gymnasio schools all over Greece.

That was the beginning of the era of the Smart Classroom of Tomorrow (SCT). Or was it not? Many question and concerns follow this project. Can this step change the way the school operates, the way teachers teach and finally the way students, young kids, learn? Was there a bigger plan, something that covers all angles of the problem?

We shall examine, herein, all the aspect of this major effort as proposed in the strategic plan elaborated by Research Academic Computer Technology Institute (RACTI). RACTI has been a

technical and scientific consultant for the Greek Ministry of Education, Lifelong Learning and Religious Affairs (Ministry) for the last 15 years. Within this framework it undertook the elaboration of a strategic plan on the way to SCT. In this paper the first steps towards the realization of that plan are described.

## 2. The need for a Master Plan

Rapid global technological and economic developments have placed greater demands on education systems around the world [4]. As a reaction to these challenges various countries have responded in different forms and at varying levels so as to enable their people to adapt to change, inspire creativity and innovation, and enhance their ability to apply knowledge and solve emerging problems with confidence.

Policies and strategies have been developed to integrate ICTs into education [1, 3, 6, 7]. A wealth of experiences, good practices and lessons has been generated for the benefit of countries where ICT use in education has just begun as well as those countries where ICT application and integration in education are well established:

1. Advanced countries with integrated ICT in the education system. Some typical characteristics of these countries are as follows: almost all classrooms are equipped with computers and other ICT tools; the computer/student ratio is high; Internet access is available in all schools; curriculum revision ensures nationwide ICT integration; delivery of education is increasingly online.
2. Countries where national ICT policies and master plans have been formulated and various ICT integration strategies are being applied and tested (although ICT is not fully integrated in the education system). While there is great variation in their characteristics, there are nevertheless some common features as follows: national ICT policies in education have been developed, and the goals and objectives for introducing ICT in various aspects of education have been established.

3. Some countries where efforts towards ICT integration and formulation of national policies have just begun. There are also countries that have no relevant policies but are running pilot ICT projects. In both instances, however, there is insufficient budget to implement policies and work plans and ICT infrastructure and penetration are poor.

Greece is positioned between the second and the third group: The last 10 years various projects have been implemented towards the introduction of ICT in secondary (and not only) education school [10]. Nevertheless, it is just the last months that a master plan for that purpose is being under development.

Within this framework, various approaches and relative initiations were examined [2, 5, 8, 9]. Additionally an analysis of experiences and best practices and associated problems has generated lessons learned, which are currently assessed in order to focus on the parts that are applicable in our case.

Based on the above, in the next sections of the paper, the first steps that have already planed are described.

### 3. Designing the SCT

The implementation of the SCT should be based on four major pillars: Infrastructure, Content, Training and Support. We shall examine each pillar in more detail.

First we have the Infrastructure, meaning computers and networking equipment. And by computers we mean an appropriate number of laptops per class, one for every teacher and a file server for each school. By networking we mean Wi-Fi access throughout the school, and broadband internet access for every school, through the Greek School Network (GSN) (being the educational intranet of the Ministry, which interlinks all schools and provides basic and advanced telematics services). All classrooms will also be equipped with an Interactive Whiteboard, a video projector and a locker that will provide safety and power for all netbooks in the classroom.

The next pillar is Training. And by that we mean training the teachers so that they can perform their extra duties in the classroom. Thus how to use the ICT tools, the netbooks, the interactive whiteboard, the educational software and the multimedia rich content in the classroom. Learn how to provide a better educational experience to their students and how to become better teachers altogether by and through the use of ICT.

Then we have the Content. "*Content is the King*", is a saying of our days and Content is certainly very important. Thus rich multimedia content with annotations is the plus to the modern ICT classroom. No more monolithic software. Content that is

flexible, reusable and adaptable. Educational components, small and reusable pieces of rich text, adapted to the need of the teacher for a specific lesson.

And last but not least Support. In the classrooms, in the school, at home, support everywhere. Because without a proper and sturdy support mechanism, the entire construction of the SCT could collapse at the first blow. Those are the four pillars of the school of tomorrow. Each one so distinct from the other, but all are playing their important role in this delicate structure.

Moving forward let us give some more insights about this major project. As a first step to the needed Infrastructure, as has been already mentioned, netbooks were distributed to all first year students of the Gymnasio Schools and to the teachers that would participate in this major project. The netbooks were actually entry level mini laptop class computers, having low weight (under 1,5Kg), basic networking capabilities (Wi-Fi and Ethernet), no optical media drive and a 10" - 11" size screen. An additional USB memory stick was provided for moving files, and for back-up purposes.

Preinstalled on this dual boot system (Microsoft Windows XP and Ubuntu), was OpenOffice, Antivirus and Parental Control software and a set of 16 educational software, that cover some parts of the curriculum of all three years of the Gymnasio. Also a full set of all text books on all subjects, in "pdf" format was copied in each machine.

As the next step, in every Gymnasio school, a server will be installed providing file and print services, access to educational content, and management of the entire classroom. The class will be administered with the use of a Classroom Management Software that will monitor all client activity, enable the Teacher to freeze the client, or enable a client's content to appear to all others.

Also one or two Wi-Fi access points providing connectivity for all netbooks, between each other and to the file server, will be installed in every classroom. Internet connectivity will also be provided where and when needed to the netbooks. It has to be noted that netbooks are in a different network island, separated from the administrative school network, thus providing adequate security.

An interactive whiteboard and a video projector will be installed in all classrooms that the project implementation will take place. A locker shall provide power (for recharging the netbooks) and security during intermissions and off school hours.

The second step is the provision of adequate Training to all teachers so that they will be ready to teach their disciplines using ICT in the classroom, the proper way. They will be made ready to tackle all aspects of the ICT in the classroom, like handling technology and make the best of it for their classroom. Proper training will also help them to

avoid technophobia. There is a great concern regarding teacher's willingness to participate and to carry on with their extended duties. But with the right training the teachers will be ready to perform. The training period shall be divided into three phases. During the first training phase, and apart from the typical training, teachers shall prepare education worksheets based on the ICT tools provided and they will test them at their schools during the second phase of the training. And in the third phase they will reexamine the outcomes of their in-school practice and further training on specific issues shall be provided to them. After finishing all three phases of training, teachers shall be ready to go to their schools and teach students using the ICT tools and methodologies learned.

As to the Content part of the equation, a major issue is providing for the teachers and the students a well establish and easy to use and administer Learning Content Management System (LCMS), a platform that will enable both parties to collaborate effortlessly. We are aiming in using an Open Source platform so any alterations to the platform could be made with minimal cost. This platform shall be hosted in a centralized system, and teachers and learners shall have access through the internet using a standard internet browser and thus providing seamless access to the content. The content should be easily maintained with the LCMS, and would be as reusable and easily adapted as possible. And then is the issue of creating educational content. The best, by far, source of educational content is actually the teacher community. The teachers have the expertise and the deep knowledge of the classroom and what is needed in the context of content. So they will provide, as an ongoing process, content that will be used in the classrooms by themselves and by their colleagues. A credit awarding scheme shall be established, that will give credit points for those contributing high quality content in the LCMS. Award shall be given to those having the higher score, as a token of their contribution and overall achievement.

Although there is some specific software available for part of the disciplines that are taught in Gymnasio, for some other there isn't any. So the need to develop specific software for those ones is still a challenge that must be tackled. As a first step all available software will be evaluated and tested against the new platform (netbooks). If gaps, in software covering some disciplines, are found extra provision shall be taken to close them. Always keeping in mind that content is our main concern and not the specific software.

And what shall be done with the Curriculum? Do we need to adjust, modified or alter it? And how far must we go? This is the trickiest question of all. The Curriculum is the foundation on top of which the entire classroom's teaching is based. And yes, we

shall examine the Curriculum in depth, to find all the issues that possible disallow the implementation of the SCT, and make all necessary arrangements. The extent of this modification is not visible yet. It may be shallow or deep. And it's a necessity not an option.

Last but not least is the issue of the Support mechanism that has to overlook the entire deployment of the project since there isn't a better way to destroy an implementation than to leave it unsupported. A two level support scheme is proposed. Well trained informatics teachers shall provide first level support within schools, whereas highly trained engineers shall give the second level support either from the regional educational office or from the Ministry. The training for the informatics teachers shall include handling hardware, network and software issues, as well as support to the teachers of all disciplines in their teaching practices using ICT.

What we hope to accomplish by this massive introduction of ICT in the classroom?

We are hoping to make the first step towards the Smart Class of Tomorrow, using ICT:

- as a tool to promote innovation in the classroom (rich digital content, new teaching and learning methods, new educational environment, etc)
- as an intelligent administrative environment
- as a possibility of broadening the learning process (e-learning, distance learning, etc)
- as a framework for higher thinking (learner centric, self-directed, tailor learning, etc)
- as a way for our children to become better citizens for the digital future to come

And more:

- as a mean of accessing knowledge and information for All from Everywhere
- as a way to overcome technophobia
- as a tool to limit red tape
- as an instrument to diminish isolation and improve inclusion.

## 4. Conclusions

The last 10 years, the Ministry, has invested a large sum of money in a number of project for the introduction of ICT in the educational environment [10]. Last year, a major project aiming at the introduction of netbooks for all students in the first year of Gymnasio was launched. In parallel, certain initiatives and supporting actions were designed with the ultimate goal the development of a complete master plan for the introduction of the ICT in Greek secondary education.

In this paper, the immediate actions that are under implementation were described. The obvious next steps include the assessment of the results of



these interventions as well as the completion of the master plan.

In order to fulfill the last goal, it is obvious that we have to address in depth a number of issues the main of which were identified to be [4]: (i) broader environmental context, (ii) policy and regulatory environment, (iii) management and financing, (iv) ICT in schools – policy, vision and strategy, (v) technology infrastructure and connectivity, (vi) curriculum, pedagogy and content development, (vii) professional development, and (viii) monitoring and evaluation.

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### **Session 3:       Teacher Education, Education Policy and Leadership**

Leadership Role of Secondary Heads In N.W.F.P  
(Hafiz Muhammad Inamullah)

School-University Partnerships: A Double Edged Sword of Accountability and Empowerment  
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Issues in the Design and Implementation of Early Years Professional Status in England  
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# Leadership Role of Secondary School Heads in N-W.F.P.

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## Abstract

*This paper focuses on the behaviors and practices of leadership role of secondary school heads. The author prepared two types of questionnaires for heads of secondary schools and teachers of secondary schools. The data analysis revealed various results and findings.*

## 1. Introduction

Leadership is defined in various ways upon the viewpoint, belief and comprehension of the definer. Different authors describe leadership differently as: "The process of influencing others to achieve mutually agreed upon purposes for the organization" Patterson defines leadership as very personal process between two people, in which the one attempts to guide and motivate the other to make plans for achieving aims of school system [10].

Poor leadership means an absence of hope, which, if allowed to go on for too long, results in an organization becoming completely nonfunctioning. The organization must deal with the practical impact of unpleasant change, but more importantly, must labor under the weight of employees who have given up, have no faith in the system or in the ability of leaders to turn the organization around.

The leadership role of heads in sustaining and creating a learning organization is to help in developing the capacity to carry out their mission. Leaders manage the organizational structures that support continuous learning, collect and disseminate information about the school's performance. Continuous learning in the school must be supported for the students and the faculty. Therefore, the principal as leader has to break down the barriers to collaboration and, by example, model collaborative practices and make decisions democratically [6]. Hallinger and Murphy stated that principals viewed the effects of change and restructuring in terms of a loss of power and control [5]. Principals predicted that their new role would eliminate decision-making in isolation. Patterson suggested that leadership is effective when it influences others to achieve mutually agreed upon and socially valued goals that help an organization to stretch to a higher level.

The research of Stringfield and Teddlie supported the theory that principal leadership is critical to creating and sustaining effective school programs [13]. Administrative leadership should be assigned to

schools based on the principal's appropriateness of the principal's leadership to the school context.

It is the opinion of many educators today that the leadership of the school principal is the key component in school success. Fleishman states the principal is the key to a good school and even went further by stating, Show me a good school and I will show you a good principal [4]. The success of an organization or any group within an organization depends large on the quality of its leadership in all fields.

The importance of leadership is not lost as school system and institutions of all shape and sizes cumulatively spend billion of Rupees every year to recruit, select, evaluate and train individual for leadership positions. Every educational institution requires a leader known as the head of the institution. In secondary schools headmaster / headmistress or principal is the head of the educational institution, who is the most responsible person in a school to run all the activities. Their consequences (success or failure) depend upon his/her actions. He/She has to contact at a time, with staff, parents and public. Infect him/she is the head of the school both academically and administratively. The headmaster/headmistress plays very important role in the process of education. He/She is the leader of the school. He/She has to lead persons who are both intelligent and well qualified persons. Like other leaders, he/she takes the praise as well as the blame for the reputation of his/her school. Therefore he/she should be a man woman of wholesome and balanced personality. Therefore he/she should take interest with his/her profession. As his/her position is very significant in the school, therefore all the activities of the school relating to teaching, organization or administration depend upon the headmaster/headmistress. Like his/her position, his/her duties and responsibilities are also very important.

The headmaster/headmistress is the team leader and the spirit of cooperation should permeate the entire dealing with the staff, people and community. He/She with close collaboration of his/her staff should work for accomplishing the objectives and ideals of the institution set before them. The success and achievement of the school largely depends on his/her efficiency, ability, alertness imagination, experience and resourcefulness.

The headmaster/headmistress should be a man/woman of great head and heart. He/She must have good qualification in general education as well

as in professional training. He/She must be a person with character and integrity. He/She should be a learned person and should have faith in himself/herself, in his/her profession, in his/her staff and his/her pupils. He/She should inspire all staff, students and public. He/She should therefore have adequate proficiency in maintaining proper human relationship -with all concerned. In the words of Bray, the main duties and responsibilities of a headmaster/headmistress are classified in to three main categories:

- Duties of organization
- Duties of teaching
- Duties of supervision

To perform these duties and responsibilities effectively he/she should have a good leadership. Therefore the study was mostly concerned with the leadership role of government secondary schools head of N-W.F.P.

Government secondary schools head is the most responsible person in a school and head has to run the school effectively. As all the activities and their consequences totally depend upon him/her. Therefore in the light of above abscessions, the main purpose of the study was to investigate leadership role of secondary school heads in North West Frontier Province. The objectives of the study were:

1. To investigate the leadership role of Government secondary schools head in N-W.F.P.
2. To identify the strengths and weaknesses regarding to the role of different types of heads in the Government secondary schools in N-W.F.P.
3. To identify the problems faced by the heads of Government high schools.
4. To compare the leadership role of the male and female heads of Government secondary schools.
5. To give suggestions for the improvement of leadership role of heads of Government secondary schools.

## 2. Research Methodology

### 2.1. Population

The population of the study was constituted of all the 760 heads of 1500 Government secondary schools and all the 4517 Senior English Teachers of Government secondary schools in N-W.F.P. [12].

### 2.2. Sample

Out of the above-mentioned population following category-wise sample was taken:

1. Thirty government secondary schools for boys and thirty government secondary schools for girls selected at random were selected as the sample for the study.

2. Half of the schools selected for the study were from urban areas while the rest of the schools were from the rural areas.

3. All the heads of the selected government secondary schools were included in the study.

4. Two Senior English teachers from the same selected government secondary schools were taken at random for the sample. Due to limited time and resources, the study was delimited to Government secondary schools of Kohat, Karak and Hangu districts of North west Frontier province (NWFP) of Pakistan. The institutions in private sector were not being included in the sample.

## 3. Research Instruments

The researcher prepared two questionnaires using five-point Likert scale after going through the related literature, consisting of books, journals, articles, reports, magazines with the help of honorable supervisor and co-supervisor. Their suggestions were incorporated in the questionnaires:

1. Questionnaires I for heads of Government secondary schools.
2. Questionnaires II for teachers of Government secondary schools.

### 3.1. Construction of the Questionnaires

For the convenience of the respondents, questionnaires were prepared from related literature and with the help of supervisor consisting of twenty two items each. The items were included, eliminated, upgraded and finally selected under the guidance of the supervisor, keeping the view of the following criteria:

- In-relevance to the objectives of the study.
- Clear and unambiguous.
- Inconsistence with the scope of the study.

### 3.2. Questionnaire for Heads of Institutions

The questionnaire for heads of institutions of male and female each (see Table 1, Table 2 and Table 3) consisted of 65 items which were based upon 5 point Likert scale. These questionnaires were on three main roles of quality of leadership.

- Administrative role (22 items)
- Supervisory role (22 items)
- As an educator (21 items)

### 3.3. Questionnaire for Teachers

The questionnaire for teachers of male and female each (see Table 1, Table 2 and Table 3) consisted of 65 items which were based upon 5 point likert scale. These questionnaires were on three main roles of quality of leadership:

Table 1. Questionnaire for School's Head and Teachers (A: Administrative Role)

<b>A:</b>		<b>ADMINISTRATIVE ROLE</b>				
YOU AS A SCHOOL PRINCIPAL /HEADMASTER/HEADMISTRESS						
S.No.	ITEM STATEMENTS	A	B	C	D	E
1.	Assign duties after consulting colleagues.					
2.	Act after consulting group members.					
3.	Impose your suggestions.					
4.	Initiate activity.					
5.	Delegate responsibility and authority to subordinates.					
6.	Distribute work on just basis.					
7.	Assign right job to a right person.					
8.	Guide and appreciate the staff to develop sense of humor.					
9.	Hold meetings with teachers, students and parents.					
10.	Invite and encourage suggestions from colleagues.					
11.	Analyze situation carefully before taking any decision.					
12.	Acknowledge subordinate's work.					
13.	Establish plans and agenda for meetings with teachers, students and parents.					
14.	Encourage free expression of ideas to build consensus.					
15.	Try to improve school operation.					
16.	Motivate the members for achievement of tasks.					
17.	Have a strong desire for achievement of tasks.					
18.	Bring changes through research and enquiry.					
19.	Encourage co - curricular activities.					
20.	Accept victory and defeat gracefully.					
21.	Try to be a role model for subordinates.					
22.	Work effectively under frustrated conditions.					

Table 2. Questionnaire for School's Head and Teachers (B: Supervisory Role)

<b>B:</b>		<b>SUPERVISORY ROLE</b>				
S.No.	ITEM STATEMENTS	A	B	C	D	E
1.	Are familiar with the names and background of the students?					
2.	Provide conducive environment for teaching and learning.					
3.	Make sudden visit of teachers while teaching in classrooms.					
4.	Observe the teachers in curricular and co-curricular activities.					
5.	Talk with teachers for effective teaching and learning.					
6.	Make necessary correction to the teachers after observation.					
7.	Motivate the teachers to participate in decisions related to instruction.					
8.	Aware of teachers and students performance in curricular and co - curricular activities.					
9.	Give instructional tips to the teachers.					
10.	Recognize high performance of the teachers.					
11.	Give rewards to teachers and students on their best performance.					
12.	Coordinate and guide the continuous development of the teachers.					
13.	Hold conferences for teachers to improve their teaching methodology.					
14.	Encourage taking first steps toward innovation.					
15.	Contact parents to resolve student's problems.					
16.	Have a regular liaison with parents/guardians of the students.					
17.	Manage for assessment of instructional program.					
18.	Care teachers self esteem.					
19.	Contact high ups in resolving teacher's academic problems.					
20.	Orient the new teachers to become successful ones.					
21.	Guide teachers in maintaining school discipline.					
22.	Organize parent's teachers association for exchange of information between school and community.					

Table 3. Questionnaire for School's Head and Teachers (C: As an Educator)

C:	AS AN EDUCATOR					
1.	Introduce new ideas about educational goals.					
2.	Focus on the overall personality development of the students.					
3.	Arrange teachers training programs.					
4.	Nominate teachers to attend educational workshops, seminars and conferences.					
5.	Want to bring change in the curriculum.					
6.	Favour of the curriculum which meet the needs and demands of the society.					
7.	Appreciate in-service teachers training.					
8.	Arrange educational seminars in the school.					
9.	Encourage inter school visits.					
10.	Favour inters school competition.					
11.	Cooperate with other agencies in arranging educational programs.					
12.	Motivate teachers to attain the objectives of education.					
13.	Suggest teachers to modify their teaching methodology.					
14.	Focus on teachers to improve their professional qualification.					
15.	Guide and encourage teachers to apply technology to maximize students learning.					
16.	Invite educational experts to visit school.					
17.	Favour the use of emerging technology in teaching learning strategies.					
18.	Request higher authorities to make arrangement of refresher courses of teachers.					
19.	Disseminate information among the teachers with respect to training.					
20.	Take interest in the quiz competition among the students.					
21.	Take care for social and moral training of the students.					

- Administrative role: (22 items)
- Supervisory role: (22 items)
- As an educator: (21 items)

#### 4. Data Collection

The questionnaires were administered to the respective respondents. The information from the respondents were collected and recorded by the researcher to avoid any kind of discrepancies. The researchers visited each institution himself for that purpose. Hundred percent data from sampled colleges were collected properly.

#### 5. Data Analysis

The data collected through the above mentioned research instrument were tabulated (tables available with authors), analyzed and interpreted in the light of the objectives of the study. The responses obtained through the above mentioned research instruments were scored before statistical analysis and interpretation. The items were given by rating the

responses on five point rating scale (i.e., Likert scale). The following scoring procedure was adopted:

- Almost Does so 5
- Frequently Does so 4
- Occasionally Does so 3
- Rarely Does so 2
- Never Does so 1

After scoring the items, the scores of the individual items were added to get the sum of overall scores. The most suitable statistical tools like mean, standard deviation, standard error of mean, t, test and Pearson product- Moment Coefficient of Correlation (r) were applied and for his purpose following formulae were used to obtain the result.

### 5.1. Mean

Mean score was calculated to see the strength of responses of each item.

$$\text{Mean of sample } \bar{X}_1 = \frac{\sum X}{N}$$

Where f = Frequency / no. of responses

N = Total number of responses

$$\bar{X}_1 = \text{Mean}$$

### 5.2. Standard Deviation

Standard deviation is the most stable in the variability.

$$\text{Standard deviation .S.D.} = \sqrt{\frac{\sum x^2 - \frac{(\sum x)^2}{N}}{N-1}}$$

OR

$$\text{Standard deviation .S.D.} = \sqrt{\frac{SS}{N-1}}$$

$$\text{Where } SS = \sum x^2 - \frac{(\sum x)^2}{N}$$

### t - test for Independent Samples

For the sake of inferential analysis, independent t-test for two independent sample groups was applied for measuring differences between two samples groups on the basis of comparison of different variables in male and female principals and teachers of government high schools in N.W.F.P in educational setting.

The following formula was used for inferential analysis.

$$\text{Mean of sample } \bar{X}_1 = \quad \text{Mean of sample } \bar{X}_2 =$$

$$\text{Difference} = \bar{X}_1 - \bar{X}_2$$

$$t = \frac{(\bar{X}_1 - \bar{X}_2)}{\left( \frac{\sqrt{SS_1 + SS_2}}{n_1 + n_2 - 2} \right) \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}$$

Where df = degree of freedom =  $n_1 + n_2 - 2$

Since  $n_1$  and  $n_2$  are the number of cases in the sample. Probability level for acceptance and rejection of the hypothesis level was 0.05 [2].

## 6. Discussion

The study result in the light of the views of male and female heads revealed that the heads assign duties to their subordinates according to their potential, abilities and capabilities and initiated activities in their schools. Female heads attitude were more appreciated in this regard. Initiation of activities of male heads was found more significant than female heads. However teachers' responses that a good deal of principals believe in favouritism and assign examination duties to their favourite teachers. Naseer noted that principals' places staff members on jobs in which their individual abilities are most likely to be fully utilized [7].

It was found that the heads delegate authority and responsibility but not up to the mark. Female heads delegate authority and responsibility effectively more than male heads up to some extent. As for as teachers are concerned they feel some differ to this response. This finding of table 13 accepts the idea of James who proposes that responsibility is off course key to success. Rise and fall in authority must not affect the responsibility. Good leaders delegate's responsibilities, which make his load, become much lighter and definitely easier to administer. With this delegation comes the responsibility and accountability of the teacher.

An immense number of heads adopted that they acknowledge subordinates' work and recognized the importance to free expression of ideas to build consensus. However these are responses of heads but the researcher take this response against because of the ground realities of our society. Teachers have positive comments on these items. Acknowledge subordinate's work of female heads were better than male heads and encourage free expression of ideas to build consensus of male heads were being viewed as more favourable for the enhancement of shared leadership. This finding testifies Dean that there are three elements, which are positive motivators for teachers are recognition, interest praise and encouragement, challenges to teachers' professional skills and carrier prospects.

A bulk of the heads tries to improve school operation, guide teachers in maintaining school discipline, make sudden visit of teachers while teaching in classrooms, observe the teachers in curricular and co-curricular activities, talk for effective teaching and learning and favours of the curriculum which meet the needs and demands of the society and suggest teachers to modify their teaching methodology. But this may differ from person to person. As for as teachers are concerned they have an opposite response to their heads. These aspects of leadership were given more weight age by female heads than male heads. These findings support idea of Powell that principals visit classrooms frequently [11]. Naseer analyzed that principals ensure

evaluation of teachers' performance regularly [7]. Niazi concluded that the curriculum being taught at schools is according to growing needs of the society [8]. Forsyth and Talleircao admitted that student learning is a priority for successful principals and those principals needing know the curriculum and understand good classroom instruction [3].

Data collected in this study found that most of the heads motivate the teachers to participate in decisions making related to instruction, coordinate and guide for the continuous development of the teachers. Teachers are not satisfied with their heads with respect to these statements. These aspects of supervisory role were organized bitterly by female heads than male heads. This result supports effective decision-making should incorporate participation whenever practical. Naseer accepts that principals give feedback to teachers on their academic performance.

It was found that the heads organize parent's teachers association for exchange of information between school and community and contact parents to resolve student's problems as essential for schooling for last five years (Schools and literacy department [12]). However, its effectiveness is still debatable in our society. As for as teachers are concerned they have a positive response about the organization of parent's teachers association for exchange of information between school and community and its effectiveness. Female heads performance was observed better than male heads. This result encourages Aaman Khalid who stated that performance management is viewed as a tool for professional and organizational and can allow for the generation of a co-operative and mutually relationship between the organization, its staff, parents and students [1].

Many heads were of the view that they manage for assessment of instructional program and suggest teachers to modify their teaching methodology. Teachers have a positive response about these items. These ingredients of supervision were managed well by female heads. Papalewis and Fortune supported these findings stressed the value of the curriculum and instruction [9]. They recommended that assessment is an integral part of the instructional program. Forsyth and Talleircao analyzed that student learning is a priority for successful principals and those principals needing know the curriculum and understand good classroom instruction [3].

Data collected in the study found that heads introduce new ideas about educational goals and motivate teachers to attain the objectives of education. As for as teachers are concerned they are not satisfied with their heads to perform these duty efficiently. Female heads managed well these duties as an educational expert. This idea favours Scheer that the administrator is the one who formulates the

long range objectives of education and guidelines for the accomplishment.

Most of the heads focus on the overall personality development and takes care for social and moral training of the students. Teachers are not satisfied with their heads and think that they do not care for this. Female heads care more than male heads for a balance personality development of students. This result is supported by Niazi that attention is given to the character building, religious and ethical development of the students in the school.

A great number of heads disseminates information among the teachers with respect to training, appreciates in-service teachers training and nominate teachers to attend educational workshops, seminars and conferences. However teachers take care for financial benefits and refreshment opportunities. Heads may be biased in nomination of teachers for training. As an educator these responsibilities were well performed by female heads. This result supports Niazi that principals nominates teacher for recruitment is standardized and recommended that in-service training should be provided to teachers.

Most of the heads encourage inter school visits but very rare in case of students, take interest in the quiz competition among the students and favour inters school competition with great enthusiasm. However teachers have some observation about these items. These responsibilities were well performed by female heads as an educational expert.

Data collected in the study found that heads cooperate with other agencies in arranging educational programs, request higher authorities to make arrangement of refresher courses for teachers and focus on teachers to improve their professional qualification. Teachers are not satisfied to their heads regarding these matters. Female heads deal effectively in this regard than male heads. Naseer recommended that principals should provide ample chances for professional growth of teachers [7].

A great number of head favours, guide and encourage teachers to apply technology to maximize students learning. But teachers' complaint that these appropriate teaching materials is not available in the schools due to low budget. These responsibilities were well performed by male heads as an educational expert. This result testifies Harris et al, that successful leaders of future need to be prepared to lead others in understanding the implications of information and communication technology for modes of teaching and learning.

Data analysis shows that urban heads perform their leadership role more effectively than rural heads due to more conducive and facilitative environment. Although the researcher made an effort to conduct the study to obtain facts about actual state, of different aspects of leadership role were



highlighted in this study. This study appears to cover most of the aspects of leadership role of secondary school heads, yet the results may be erroneous. Ground realities regarding the issue of genuineness of research in Pakistan are still debatable because the respondents did not give sufficient time for filling in the questionnaire or concealed true answers about real facts and figures due to a variety of personal reasons. As we have not developed research culture up to now and most of the respondents hesitate to give proper information regarding their jobs. They only tended to tick the columns or rows in a questionnaire without giving much thought and attention to the statement. It would have better to interview higher authorities involved in the system of Secondary school education, teachers and students. Moreover, parents of the students could also be interviewed about existing facilities and flaws of Secondary school education. Teaching system, methodology and technology being used in the classrooms could be directly observed for assessment and evaluation of daily classroom teaching activities. The responses given by the teachers may be biased. It might be possible that their relations with heads were not good and they tick incorrect choice. Therefore these results might be incorrect.

## 7. Conclusions

The researcher conclusions were based on his findings. Some findings in this study confirm, some disagree with, and some went beyond the research findings presented in the literature review. The researcher conclusions, based on the findings, only partially confirm the theory set forth at the beginning of the study. Possible revisions to theory concerning the behaviors and practices of leadership role of secondary school heads are presented at the end of the discussion of the conclusions. Findings from this study led to the following conclusions:

- Some socio demographic variables do not appear to be associated with leadership role of the heads. These were gender, name, designation, age, BPS, academic qualification, year of total experience, year of administrative experience, locality of the school and ownership of building. Males and females were equally selected and proficient in this study. Older and younger heads and teachers did not differ across all type of proficiency and year of experience distinguished more proficient in the leadership role of secondary schools heads. Most of the heads and teachers have a master degree and were of 50 years of age. Majority of the heads were promoted on seniority basis. However some senior English teachers were appointed in charge heads.
- The study result in the light of the views of male and female heads revealed that the heads assign duties to their subordinates according to their potential, abilities and capabilities and initiated activities in their schools. Female heads attitude were more appreciated in this regard. Initiation of activities of male heads was found more significant than female heads. However teachers' responses that a good deal of principals believe in favouritism and assign examination duties to their favourite teachers.
- It was found that the heads delegate authority and responsibility but not up to the mark, acknowledge subordinates' work and recognized the importance of encourage free expression of ideas to build consensus. As for as teachers are concerned they feel some differ to this response. However these are responses of heads but the researcher take this response differ because of the ground realities of our society. Female heads delegate authority and responsibility and acknowledge subordinate's work effectively more than male heads up to some extent and encourage free expression of ideas to build consensus of male heads were being viewed as more favourable for the enhancement of shared leadership.
- A bulk of the heads tries to improve school operation, guide teachers in maintaining school discipline, make sudden visit of teachers while teaching in classrooms, observe the teachers in curricular and co-curricular activities, talk for effective teaching and learning and favours of the curriculum which meet the needs and demands of the society and suggest teachers to modify their teaching methodology. But this may differ from person to person. These aspects of leadership were given more weight age by female heads than male heads.
- Data collected in this study found that most of the heads motivate the teachers to participate in decisions making related to instruction, coordinate and guide for the continuous development of the teachers. These aspects of supervisory role were organized nicely by female heads than male heads.
- Many heads were of the view that they organize parent's teachers association for exchange of information between school and community and contact parents to resolve student's problems, manage for assessment of instructional program and suggest teachers to modify their teaching methodology. These ingredients of supervision were managed well by female heads.
- Data collected in the study found that heads introduce new ideas about educational goals, motivate teachers to attain the objectives of education, focus on the overall personality development and takes care for social and moral training of the students, disseminates information among the teachers with respect to training,

appreciates in-service teachers training and nominate teachers to attend educational workshops, seminars and conferences. However teachers take care for financial benefits and refreshment opportunities. Heads may be biased in nomination of teachers for training. As an educator these responsibilities were well performed by female heads.

- Most of the heads encourage inter school visits but very rare in case of students, take interest in the quiz competition among the students and favour inters school competition with great enthusiasm, cooperate with other agencies in arranging educational programs, request higher authorities to make arrangement of refresher courses for teachers and focus on teachers to improve their professional qualification, favours, guide and encourage teachers to apply technology to maximize students learning. But teachers' complaint that these appropriate teaching materials is not available in the schools due to low budget. These responsibilities were well performed by male heads as an educational expert.
- Data analysis shows that female heads perform their leadership role in a better way than male, there is a significant difference between the male and female leadership role of secondary school heads, urban heads perform their leadership role more effectively than rural heads due to more conducive and facilitative environment, there is a significant difference between the heads and teachers view about leadership role of secondary school heads in N-W.F.P. Majority of the teachers assumed that there is no significant difference between leadership styles and mode of selection.

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# School-University Partnerships: A Double Edged Sword of Accountability and Empowerment

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## Abstract

*Research literature on school reform and teacher change states that there has been a persistent and growing sentiment that public schools are failing to meet societal expectations. This has resulted in numerous change strategies, including the school-university partnership. This partnership is perceived as a method to empower teachers, but also make them more accountable. This study asks: "To what extent do both teacher empowerment and teacher accountability play a role in school-university partnerships?" The findings showed that teachers feel accountable to numerous people and institutions; however, empowerment was also possible. Based on these findings, school-university partnerships appear to be a possible path to successful school reform but several areas need to be addressed, such as basing partnerships on the day-to-day needs of teachers; realizing change takes time; picking the right people for the partnership; having an equal, but critical partnership; and critically embrace third-party partners.*

## 1. Introduction

School reform is not a new phenomenon, and it is not limited to any single country. In the U.S.A., U.K. and Canada, there has been a persistent and growing sentiment that public schools are failing to meet societal expectations. There is an assumption that all is not well with the educational system and students are not receiving the best education possible. The cause is largely assumed to be teachers and their inadequate teaching [29]. Yet, while teachers are often perceived as the cause of a failing educational system, not until recently has professional growth has been offered to help improve teaching and teacher quality [1; 11; 28]. Instead, a top-down approach or what Chin and Benne [7] call an empirical-rational approach to change has been typically imposed.

The empirical-rational approach to change imagines the 'ideal' and offers steps to achieve it. Here, research and implementation are treated as a linear process where research is conducted by academics or professional researchers, their findings are given to the change agent, the teacher, where it is assumed that it will be used [25]. Finally, teachers are held accountable by government officials to successfully implement the recommendations that the researchers offer.

Until quite recently this strategy of change has been predominant. This has made change extremely difficult and painful for teachers. Someone outside the classroom holds power over the changes that are expected, and this official authority holds teachers accountable to implement these changes successfully. This challenges professional experience, judgment and expertise, as the voice of the teacher is not considered at any point during this change process [20; 24; 30]. Instead of working with and/or cultivating the role of the teacher, which is most critical in implementing educational reform movements [21], teachers have rarely been acknowledged in the empirical-rational approach to change. As a result, there has been a shift to an alternative approach to change, often characterized as the normative-reeducative approach to educational change [7].

The normative-reeducative techniques to change encourage teachers to reflect on their teaching and classrooms and to experiment thoughtfully with new practices [7; 25]. It also involves sharing and dialoguing with other teachers and/or with a critical friend [25]. Strategies premised on this view of change are perceived more positively by teachers. Here, teachers are perceived as capable professionals who are now trusted in their ability to make decisions about their students' needs [10; 30]. This often results in an increased confidence in teacher decision-making abilities, an increased level of ownership and responsibility for what is happening in their classrooms, and a feeling of empowerment to make deliberate and thoughtful change [11; 25; 30].

## 2. School-university partnerships

Within both policy and practice, school-university partnerships have been perceived as a key educational-reform strategy for the past two decades [6; 29]. They consist of any number of forms that range from, but are not limited to, a single university academic working with an individual school to several university academics working with an entire school district. School-university partnerships often consist of introductory workshops, a combination of formal and on-the-job training, and regular in-service meetings for all facilitators and evaluators [6]. Peer observation, discussion, and documentation are often stressed and teachers are encouraged to collect data in order to make a convincing, research-based case that may influence educational policy [12]. These partnerships can range from a few months to several years in duration. It is believed that the longer the commitment, the greater chance of success.

While all forms and types of involvement can exist within a school-university partnership, they all share the aim of maximizing student learning and achievement through the development and implementation of exemplary practice, through sustained inquiry on practice and through meaningful, professional growth [6].

Universities and schools can be seen as key contributors in educational change and have much to gain by working together. Universities provide opportunities and instruction for teachers to partake in research that informs school improvement. In return, schools provide access to field work and knowledge regarding the practicalities of teaching that is imperative to move research forward [2]. School-university partnerships can be transformative, yet it would be inaccurate to say that this is the norm. While many school-university partnerships aim to create a positive collaboration that will invoke change, it has often been overshadowed by institutional differences and the difficulties arising from these differences [31]. Instead of being partners, professors become leaders while teachers are left feeling like passive followers [13]. Research has also found that teachers have experienced added stress and pressure, and causing division among their colleagues [11; 15]. Micropolitics, otherwise known as processes used to acquire and exercise power to promote or protect interests [32], were also found to exist. Lastly, a great deal of accountability and control has been perceived as built into this collaboration [26].

## 3. Teacher Accountability

Accountability in education is not a new idea. In the U.S.A. and in Canada, the term accountability has been prominent in the educational literature for about thirty years and in Britain it has persisted for

over one hundred years [14]. It has meant different things to different people, and has occurred in many overt forms. It has included pupils' progress to be judged by parents and schools, assessment arrangements in the core subjects and public examinations which measures pupils' progress, new recording and reporting requirements, teacher appraisal, publication of the results of national curriculum tests and public examinations, and school inspections designed to hold schools accountable for their performance [8; 4; 5; 20; 23]. All sorts of new constraints have taken place, including what should be taught, how it should be taught and how much time teachers should take to teach it [20]. Processes and practices previously left in control of educational professionals have changed dramatically with the growing belief that teachers have failed to adequately educate students. However, while teacher accountability has heavily persisted in the school reform movement, it has been increasingly recognized that in order for school reform to be successful, teachers themselves need to have a voice, and for this voice to hold status and respect. In essence, they need to be empowered.

## 4. Teacher Empowerment

The concept of teacher empowerment is discussed in different school management strategies for educational reform [10; 17; 22], including the school-university partnership. Shared decision making, local control, and collaborative leadership are emphasized. Teacher empowerment means spreading decision-making throughout the entire institution and letting those who are in a position to carry out the decisions to be responsible for them [17]. It is giving teachers a sense of ownership and connectedness to their jobs, which leads to increased job satisfaction, motivation and commitment, improved communication and quality of teaching, and more efficient decision-making. It also should be viewed as a process rather than a product.

As a response to education reform and the movement from centralized decision-making to site-based management in education (which also could simultaneously hold measures of accountability) there are six dimensions to teacher empowerment. The first is shared decision making, which incorporates the teachers' voice in school decisions they normally have not been a part of. The second dimension is continued professional growth where teachers can develop their own self-images as knowledgeable individuals rather than being told what to know. The third dimension of teacher empowerment is for teachers to feel that they are respected both in and out of school. Fourth, when teachers believe their behaviours and performance can make a difference in the lives of students, they gain empowerment through self-efficacy, otherwise

known as a willingness to undertake challenging tasks, expend greater effort, and show increased persistence in the presence of obstacles. The fifth dimension of teacher empowerment is teacher autonomy. Without a significant degree of teacher autonomy, organizational control may deny teachers the very power and flexibility they need to do the job effectively, undermine their motivation, and diminish their commitment to their job, which ultimately results in high degrees of teacher turnover [20; 19; 22; 24; 30]. Lastly, teacher impact, the final dimension of teacher empowerment, refers to a teacher's belief that s/he can affect or influence the life of school. Teacher empowerment is seen as a possible path for school improvement and this is the aim for many school-university partnerships. Teachers are not simply learners and university faculty does not simply provide solutions. They work together in collaboration where both are encouraged to take risks and to develop their voice.

Still, while the developing role of the teacher and the teacher educator holds exciting possibilities, it is important to not overlook the fact that the freer we are to make decisions about ourselves and the worlds around us, the greater our responsibility [27]. In other words, teachers and teacher educators should be aware that empowerment is a double-edged sword: it holds possibilities for greater decision-making abilities and empowerment, but ultimately accountability is embedded in each decision that is made.

## 5. Research Question

This study asks: "To what extent do both teacher empowerment and teacher accountability play a role in school-university partnerships?" This study has two related objectives. The first objective is to gain an initial understanding of teachers' perceptions and attitudes about the role of teacher empowerment and teacher accountability in school-university partnerships. The second objective is to situate these voices within the literature on school reform and teacher change.

## 6. Methods and Procedures

Quantitative and qualitative research methods, including analysis of public documents, constitute this study. First, all thirty-six of the teacher candidates who were involved in the 2007-2008 Western School Board (WSB)<sup>1</sup> school-university partnership were invited to complete an online survey and twenty-one participated. The questionnaire was administered to capture general

trends, to suggest questions for the interview protocol, and to provide a wider understanding of teacher accountability and teacher empowerment in school-university partnerships. Second, this study analyzed documents provided by the WSB. These documents were created at the conclusion of the school-university partnership. These documents are currently available to the public. Third, semi-structured interviews were conducted with thirteen teachers. The questions for the interviews were derived from the literature, survey results, and the school board documents.

## 7. The Case Study

This research project was a case study of a school-university partnership that took place during the 2007-2008 school years. Within this partnership there were seven action research projects with two to seven participants in each group. The partnership's aim was to provide an opportunity for teachers, a researcher, and a school board program leader to work collaboratively toward improving teacher practice and student achievement through action research. This aim was largely due to present governmental policies and benchmarks. In order to meet this aim, six half days were allotted for teacher professional growth. Three half days were prearranged for the teachers to jointly work with a university academic and the school board program leader, two half days were for in-school professional growth where each group of teachers collected data for their project, analyzed the data, wrote their required final report, etc. The sixth and final half day meeting was for all groups to come together, share their findings, and to reflect on the process.

## 8. Findings

The results of the survey, the interviews, and the school board documents reflected similar findings and revealed several themes in regards to teacher accountability and teacher empowerment.

### 8.1. Teacher Accountability

Accountability in this case study was no different than the literature indicates. First, accountability to the government was felt by the teachers. From improving "EQAO testing scores" to "having that 85% graduation rate by the year 2010", it was clear from the teacher interviews that government policies and benchmarks were indeed central to the project and the teachers strove to meet them.

Second, accountability to peers was felt by teachers. In fact, 100% of participants stated that they felt accountable to their peers both within the partnership and those peers who were not

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<sup>1</sup> Western School Board is a pseudonym.

participating in the school-university partnership. This was mostly due to the fact that they had committed to this project. Third, accountability to students was felt by 90% of the participants. This was predominantly because they felt it was in their job description and to be a change agent now that they had useable data driven information. Fourth, and not referenced in the academic literature, are teachers feeling accountable to the school board to effectively use the additional professional development time and to maintain focus during this time. Fifth, accountability to the school community and the community at large was felt. Sixth and lastly, accountability to the grant funding body to give feedback so they knew that their money was well used was felt.

As one can understand, accountability felt by teachers is extensive. However, with this accountability, empowerment also occurred, although perhaps not directly realized by teachers.

## 8.2. Teacher Empowerment

At first glance at the data, it appears that the teachers in this school-university partnership are attempting to empower everyone and everything, including students, peers, the school board, and government mandates. Nonetheless, when one looks at the literature written on teacher empowerment, one can see that shared decision making, teacher autonomy, continued professional growth, self-efficacy, and teacher impact have all been documented as characteristics that lead to teacher empowerment [17]. These also were present within this study.

In this study, shared decision making and teacher autonomy both were felt to occur. 100% of the participants stated that the team collaboratively chose the plan of action, 86% of the participants felt that their individual opinion greatly mattered within their team, 81% felt that their feedback was greatly considered, and 90% felt that they had the ability to make their own decisions.

Continued professional growth was also felt to occur within this school-university partnership by the majority of teacher participants. For example, 62% of the participants stated that they greatly experienced improvements in the quality of teaching, 81% stated that this school-university partnership provided great opportunities to think/talk about their practice, which increased confidence. Teachers were able to step out of their comfort zone, to learn new things, and try them out in front of others. It also brought people together through collaboration and dialoguing. This in turn allowed teachers to empower each other, and through support, empower themselves.

A third dimension to teacher empowerment is a strong sense of self-efficacy. Almost all of the

teachers felt that this school-university partnership, moderately (47%) to greatly (33%) allowed them to take risks as a teacher. It allowed them to experiment with support of their peers. This in turn allowed teachers to gain confidence and make positive and relevant changes.

In this study, teacher impact was felt for a great number of reasons, including: completing research, student improvement, attitude changes and changes in practice. Teachers felt a great deal of empowerment because they were seeing positive results occurring due to their projects.

## 9. Conclusions

School reform is not a new phenomenon and it is not limited to any single country. School-university partnerships have been perceived as key to successful educational reform. However, both teacher empowerment and teacher accountability are embedded within these partnerships. Looking at the evidence and arguments discussed in this study, it appears that school-university partnerships are a double-edged sword: one that holds a great deal of accountability for teachers and also one that simultaneously has the ability to offer opportunity and empower. For example, school-university partnerships are created because the education system and/or teachers were still perceived as needing improvement. Yet, while accountability was felt by the teachers, increased collaboration and confidence, sharing decisions, growing professionally, and seeing results from the changes teachers were trying to make, illustrates that teacher empowerment is also possible, whether or not teachers outright recognized this new empowered position.

Based on these findings, I believe that school-university partnerships are a possible path to successful school reform. Yes, these partnerships can be riddled with accountability and micropolitics and yes, change is not easy. Nevertheless, they can give opportunities for teachers to become more critical and thoughtful in their practice. They can also keep agendas and change moving forward because while it is possible, it is unlikely that teachers would create successful, time-specific school-university partnerships on their own, without deadlines and professional growth time allotted in their already time-saturated professional life. However, while school-university partnerships are a possible way for school reform, there are a number of issues that need to be addressed.

First there is a need to base projects in the local needs of the teachers and have a critical focus where teachers are working toward change that meets their specific needs[18].

Second, it is important to recognize that change is slow. Continuous professional growth needs to take

place and one time projects are not enough to make significant change. Change has to be continual and the change that is envisioned needs to be scaffolded and clearly outlined so schools and teachers to see the direction that change is headed, dialogue, and mold the results to a clear plan of action that fits their needs [15].

Third, there is a need to pick the right people. Successful partnerships, according to many business management and leadership texts, depend on picking the right people [9; 3]. On the other hand, access to professional development has been disproportionately concentrated among those in management positions and has excluded classroom teachers [18]. Therefore, while change may begin with the leaders, it must not stop there. Instead all teachers should be encouraged to try new ideas and strategies and be supported through this process.

Fourth, a critical friendship, where all partners are perceived as skilled professionals, and who have something unique and worthwhile to offer is needed. Yes, the university needs to be a critical friend, which is a role often perceived within the academy; nevertheless, the school board also needs to be critical of the procedure and the partnership itself, and if it is suiting their particular needs.

Fifth, a less common concept: third party partners. This must be critically appraised. It is important that one must be critical when choosing partners, whether it be a school board, university, or otherwise. Everyone's motives ideally should be to improve student learning and student welfare, but one needs to be critical to ensure that this is taking place.

Lastly, it is important to remember that "we are still at the beginning of an intellectual burgeoning... [and] this revolution has barely touched schools" [16]. Collaborations are a relatively new concept in education and in educational reform; we have yet to see their full potential. With greater understanding of how such collaborations can be relevant and necessary for all partners involved, change is indeed possible.

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# Comparison Study of the Role of Principal and Leadership Development between Jiangsu of China and Ontario of Canada

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## Abstract

*The purpose of the study is to determine the most significant challenges facing principals of middle schools and high schools from Jiangsu China and to identify leadership competencies that Chinese principals need to equip, with the Ontario Principal Leadership Framework as a reference. By doing this research, a deeper understanding about the role of principal in student achievement can be acquired through the views of principals from China with their understanding about Ontario Principal Leadership Framework and their experiences in Canada during their three weeks oversea training program in Canada. Similarities and differences can be found out to help understand diversified culture and its influences to people. By the way, the result of study will also help us better organize future training programs for our trainees and more experiences can be borrowed and inspired from Chinese principals to improve education development internationally.*

## 1. Introduction

In September of 2009, a delegation of 81 principals and vice principals from middle schools and high schools of Jiangsu Province of China came to Toronto to participate a leadership training program collaborated by SuOn College and Faculty of Education, York University. SuOn College is an oversea training base of Jiangsu Province of China located in Toronto since 2007. The purpose of the program is to help Chinese school administrators to widen their visions and to learn from their Canadian colleagues through observing and understanding Canadian school administration and leadership system. In order to encourage the delegation to think critically about a principal's role and leadership development, SuOn college designed a research project called *Comparison Study of the Role of Principal and Leadership Development between Jiangsu of China and Ontario of Canada*. 40 members of the delegation voluntarily joined this study and submitted 40 survey questionnaires, and among them 5 people accepted face-to-face interviews. The research data and information are all from these surveys and interviews. The following

Table 1 is a summary of the background information about these 40 research participants.

**Table 1. Summary of 40 participants' information**

Persons		High school K10-12	Middle school K7-9	Sum
Gender	M	28	9	37
	F	2	1	3
Birth era	70s'	4	0	4
	60s'	23	10	33
	50s'	3	0	3
Position	Principal	20	7	27
	Vice principal	10	3	13

With the Ontario Principal Leadership Framework [1] as a reference, 40 research participants integrated their experiences from the training program and their past practices and knowledge in China, and summarized their personal perspectives about the role of a principal and his/her leadership development. The researchers of the study are the coordinators of this training program with very strong background of teaching, administration, training, and research in both Chinese and Canadian educational systems. So they also bring in special perspectives through their professional analysis and judgment.

## 2. Research Method

This study is based on the perceptions, opinions, and interpretations of principals and vice principals of China regarding to the role of principal and leadership development. Lincoln stated "individuals and groups made meaning based on their own experiential knowledge, rather than on an outsider's precise statistics, and that, in virtually any kind of social or programmatic context, individuals and groups would act on their own, internal, sense making and meaning-making knowledge processes rather than on our assertions of statistical rigor. They always chose their own socially-constructed, context-bound realities over our artificial and externally-imposed mathematical models of their realities" [2]. Thus, naturalistic inquiry, which is to

explore “multiple and constructed realities”, is suitable for the purpose of this study—to explore the “multiple and constructed realities” of insiders and outsiders regarding the role of principal and leadership development. The methodology is primarily exploratory and descriptive, with the intent to generate a clear, accurate portrayal of the perceptions of one group in a particular context, without looking for a generalizable conclusion. Based on individuals’ experiential knowledge, the purpose of the study is not to predict or control, but to achieve “some level of understanding”. The study is influenced by the values of the researcher, the participants and the context, for “inquiry is value-bound” [3].

### 3. Data Analysis

The researchers designed a questionnaire with five semi-opened questions based on the topics discussed in the training program by Canadian trainers and Chinese trainees, such as a principal’s role in student achievement and leadership development. The participants of the study were asked to answer these five questions with paper and pens. And five participants among them voluntarily accepted a face-to-face interview with the researcher individually. Personal background of the participants have been considered according to their school, gender, age, and position, to see any influences to their perceptions with these different factors.

#### 3.1. Leading actions of a leader

The first question “how do you define leadership? what kind of competencies consists of the leadership of a Chinese principal? ” is a classical question in leadership field. The purpose of the question is to find out difference and similarity between perceptions of Chinese principals and the Ontario Principal Leadership Framework in terms of leadership and competencies.

In Chinese language, the word “leadership” expresses two meanings: first one means “leader”, second one means “leading actions of a leader”. A group of participants explained leadership with the first meaning—as a leader, and considered a leader as an organizer, a commander, a checker, and a servant of a school. The other group stated leadership with the second meaning—leading actions of a leader, and defined leadership as actions of leading, guiding and serving.

Concerning to leadership competencies, participants put forward so many different competencies from different levels and viewpoints, such as abilities of predicting, arousing, decision-making, organizing, implementing, collaborating, communicating, studying, team-spirit, affinity,

perseverance, passion, devotion, and charm etc. But participants didn’t logically and systematically address leadership competencies in the manner of sorting leadership competencies into three categories: skills, knowledge and attitudes, which is used by the Ontario Principal Leadership Framework.

However, almost all concepts and competencies, which are mentioned in the Ontario Principal Leadership Framework, also have been mentioned or discussed in the participants’ questionnaires or interviews. This means, from a theoretical level, the perceptions and interpretations of Chinese principals regarding to leadership and competencies are quite similar with current western leadership theories, at least with the Ontario Principal Leadership Framework.

#### 3.2. Leadership Competecy

As discussed above, theoretically, most of the participants agreed with the Ontario Principal Leadership Framework in terms of leadership competencies. However, what are key leadership competencies that are mostly valued in the participants’ real situation? This personal question, “what causes you a school principal? what kind of leadership competencies do you possess or lack? ” was designed to encourage participants to connect themselves with leadership through a self-evaluation.

Generally, the participants have given higher-level evaluation to themselves with regard to leadership competencies, and considered that they have possessed most leadership competencies. As they sorted out causes that made them principals, four factors stood out distinctively: excellent subject teacher, devotion and diligence, good relationship and coordinating ability.

However, as they discussed about lacked leadership competencies, differences in their choices showed out. Some participants emphasized lack of educational theories; some thought their studying and research abilities need to be improved; some wanted to sharpen their communication skills; and some wished to cultivate their innovating ability.

Among 40 participants, only 3 people are female and are all vice principals. They showed similarities in their perceptions that they lacked of courage and confidence of controlling authority, creativity and innovativeness. This kind of perceptions is quite different from the male principals’ perceptions. Concerning to gender, during the whole training period, the researchers always heard inquiries from the delegation members: why are there so many female principals and vice principals in Canadian schools? In this training program, among 81 trainees, there are only 6 females, and only one of them is a principal, the rest five are vice principals. Gender balance looks like a very serious issue in Chinese principals.

### **3.3. Leadership Development**

The purpose of this question “how to develop leadership of a principal?” is to understand demands of Chinese principals about leadership development, so as to better design and organize future training programs for them.

Most participants thought, leadership development is a long-term and sustaining process, which needs a principal to consciously and consistently study, practice and reflect, to frequently join various trainings and workshops, and to effectively set up a principal evaluation system to motivate them. Some participants suggested making a principal development plan to promote principals’ self-improvement. Some participants proposed to draw ideas from Ontario’s Principal Qualification Program to make principal position more professionalized. Some participants also made suggestions to strengthen exchange and communication among principals in China, between China and other countries, so as to learn from each other.

### **3.4. The role of Chinese school principal in student achievement**

Based on the researchers’ judgment, to most Chinese principals, the question “how do you think the role of a Chinese school principal in a student achievement?” is a very western-style question. In Chinese culture, the role of a leader/principal is usually connected with his/her organization/school, just as a Chinese saying “a good principal is a good school”. Normally the role of a principal is not directly connected with a student achievement in Chinese culture. Thus, the purpose of this question is to challenge Chinese principals’ habit of thought by borrowing the idea from the Ontario Principal Leadership Framework—directly connecting the role of a principal with student achievement. The researchers hope, as the participants answer the question, they should see clear individual faces of his/her students, not just school buildings or blur picture of a whole school student, or even exam papers or test scores. 40 participants answered the question from theoretical and actual point of views.

Most participants theoretically addressed their opinions about the role of a Chinese principal in student achievement from two levels. From institutional level, many participants considered a principal as an overall planner, a decision-maker, a leader, a guide and a supervisor. Through various schemes and plans of teacher development, curriculum design, school administration, and school culture development etc., a principal must lead his/her school people toward the shared vision of all-

round and life-long development of each student in school; a principal must design a implementation plan for each student’s development and achievement. From individual level, many participants viewed a principal as the soul of a school, a teacher of all teachers, a teacher and parents of each student. He/she is a model to students and an educator through a action or a word which will change and influence student development unobtrusively and imperceptibly.

From actual level, many participants discussed whether Chinese principals actually play the theoretical roles mentioned above and why. One participant said: “In China, a principal is a general of a school who has to take care of everything and who spends most of energy and time not on students but on external coordination.” Another participant said: “Chinese principals play roles as a nanny and a housekeeper. Under the administrative control of government, a principal doesn’t have so much autonomy of running a school. Under the pressure of National Entrance College Examination (NECE), a principal has to push teachers to take most time of student to preparing for NECE.” Many participants pointed out, currently NECE is one of the most important assessment indicators for school education in China, which makes principals put too much emphasis on examination-oriented education, and pay less attention on student’s all-round development, especially on those students who have difficulties in learning. All participants agreed that principals should care more about those students with academic failures and difficulties, and let each student in school taste success. They’ve already seen hopes from the New Curriculum Reform, which is currently carrying out in China to encourage teachers and principals to pay more attention on individual demand and individual development through various changes in curriculum arrangement and teaching methods.

### **3.5. Chinese and Canadian principals in student achievement**

The purpose of this question “what are differences and similarities between Chinese principals and Canadian principals in student achievement?” is to help participants to clarify their thoughts about the role of a principal in student achievement through a comparative study with Canadian principals as a reference. Participants consumed most of their inks to answer this question. With only three weeks’ observation and communication, the perceptions of Chinese principals to their Canadian colleagues cannot be one hundred percent correct and overall. Furthermore, with the limitations of time and language, many of their perceptions and observations still stopped at the theoretical level that the Ontario Principal

Leadership Framework offered through the training seminars. However, based on their rich experiences and their acute insights, the perceptions, opinions, and interpretations of the participants are meaningful and worth to ponder over.

At the beginning, the participants took lots of time and energy to address the differences of two countries' principals; they also discussed the related causes. There are 8 aspects of differences clarified by the participants.

Firstly, unlike Canadian principal, Chinese principal wears a strong executive color of government officer, because a school in China is a government-sponsored institution, which is considered as an extension of government and is strongly controlled by local and national governments. Comparing with their Canadian colleagues, Chinese principals have less autonomy over their school.

Secondly, unlike a strict and normative process of appointing a Canadian principal with a professional standard such as Ontario Principal Qualification Program, Chinese principals are appointed directly by executive orders of local government mostly because of their excellent performances in teaching. To a maximum extent, a Chinese principal is only responsible for higher-ups. By the way, unlike Canadian principals, Chinese principals get less support from society and government and cannot enjoy a supporting environment to run a school together with communities.

Thirdly, unlike their Canadian colleagues who can focus on education and school administration, Chinese principals have to deal with too many external interferes from governments and society. A Canadian principal acts as a cultural man, an academic person and an educator. But a Chinese principal acts as a general manager, a government officer and a diplomatist.

Fourthly, unlike a Canadian principal who can practice his/her own education philosophy without any pressures from student entrance rate to college, a Chinese principal almost has no space to try his/her own educational idea under such a heavy pressure of National Entrance College Examination. Canadian principals care about graduation rate much more, differently Chinese principals emphasize too much on student entrance rate to college.

Fifthly, Chinese principals joked themselves under three mountains' oppress: funding, security and teaching quality. Raising-funds is a headache and one of the most important things for a Chinese principal to run a school. It not only relates with a school's fate, but also connects with staff salary and welfare. So they teased themselves as CEO principals. Relatively relaxed, Canadian principals don't need to care too much about funding. With totally financial support from government and legitimate autonomy, they focus on education quality

and security under supervision of school board and community.

Sixthly, a principal or a vice principal in Canada is a professional administrator who will focus on administration without any teaching workload. A principal or vice principal in China is an executive position, an honor and a preferential treatment. Besides carrying out all duties from this position, a principal or a vice principal has to take teaching workload, and also play other roles such as politician and social activist with unlimited duties.

Seventhly, due to smaller size of school and classes, Canadian principals take less work pressure and enjoy more happiness and success from their positions. But their Chinese colleagues have to deal with much more seriously challenges from too excessively enlarged school size, crowded classroom, complicated relationships and multiple roles. They have to endure and devote much more.

Eighthly, Comparing with their Canadian colleagues, Chinese principals have to work longer without regular weekends or holidays. And their salary and welfare are much lower than their Canadian colleagues.

On account of above differences, some participants complained that it is difficult to be a principal in China, it is even more difficult in China to be a prominent principal. Finally some participants pointed out, comparing Chinese principals to Canadian principals, quantity of external affairs taken by a principal causes a significant difference in their job performances; extent of social development and cultural background cause differences in their education philosophy and practice.

At last, the participants highly praised that both principals of China and Canada have played important roles in education development of their countries with so many similarities: they take charge of school administration; they try their best to improve education quality; they have a full responsibility to educate students; they are excellent teachers with passion, persistence, devotion and confidence towards education and students; they are the soul of a school and shoulder with very heavy pressures; they enjoy high respects and reputation from society; they undertake the same missions on behalf of the government and the nation to educate the future citizens of the community, and on behalf of the worldwide to cultivate the future human beings equipped with international vision and worldwide humanity. In a word, under the different systems, principals of both China and Canada serve the same purpose and strive for their missions in their own appropriate ways.

## 4. Conclusions

Through above five questions, Chinese principals have presented out their perceptions, opinions, and interpretations regarding to the role of principal and leadership development orderly from theory to practice, and a relatively real picture about a principal's role in a Chinese school can be clearly sketched out. From this picture, a deeper understanding about the role of a principal in China can be acquired, and some suggestions and comments from the researchers are presented here.

Regarding to the leadership and competency theory, Chinese principals have exhibited their administration and leadership knowledge. However, their perceptions didn't show a logical and systematic understanding about leadership. A leadership theory seminar is needed to help them better understand leadership theoretically.

The participants had a high self-evaluation about their own leadership, which have shown their confidence for their position and their abilities. However, from the lacked leadership competencies clarified by themselves, such as education theory, studying and research ability, communication skill, and creativity, the researchers suggests that a leadership competency training workshop focusing on skill, knowledge, and attitudes, are very useful to help them improve their leadership in practice.

From the delegation group structure, gender imbalance is apparent. Female principals also show no confidence in their leadership. Based on many research results and the researchers' judgment, in an educational organization, gender balance is very important. A female principal not only benefits educational organization itself, also encourages female staff, especially female students by playing a good example. The researchers suggest that China should learn from Canada and build up supporting systems to encourage and train more female principals with strong confidence.

Theoretically Chinese principals appreciate the ideas of Ontario Principal Leadership Framework that principal leadership is essential in improving student achievement. However, in reality, Chinese principals complain that National Entrance College Examination has distorted the nature of education and restricted principals' capacity, excessive outside interferences have influenced normal educational sequences, and overmuch external coordination has taken and wasted a principal's time and energy, which all result in less attention on student achievement and all-round development. Thus, how to play an effective role in student achievement, is not just a principal's duty. It is a systematic issue that must get supports from the whole society, including governments, schools, parents and community. Without renovation and reform in concept, system,

and culture, there is no way to let a principal play an effective role in student achievement.

The professionalization of principal position in Canada impressed many participants. Setting up a professionalized standard such as Ontario Principal Qualification Program and strengthening related trainings, might be a good way to improve leadership of a principal in China.

While doing a comparative research about leadership with different language and culture, the researcher always feel not only doing research about leadership but also about culture, tradition and history. Leadership in different circumstances always contains and reflects cultural and traditional factors behind it, which cannot be explained and understood easily.

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# Issues in the Design and Implementation of Early Years Professional Status in England

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## Abstract

*Early Years Professional Status (EYPS) is a new graduate-level, multidisciplinary status for work with the birth to five age range in the UK. The aim is for every day-care setting to be graduate-led by 2015. The University of Northampton delivers five 'pathways' to achieving the status depending on qualifications and experience. The purpose of this paper is to explore the challenges of professionalization of the workforce in a sector that is characterised by low qualifications, low pay and gendered perceptions of work roles and small scale private, voluntary and independent settings. The nationally designed 'validation' (assessment) process is explained and a 'capacity building' approach to implementation is presented. Finally alternative models of professionalism are discussed and related to the emergent identities of EYPs based on focus group evidence and concerns raised about professional isolation and long term sustainability.*

## 1. Introduction

Until the late 1990s the UK was characterised by low investment in Early Years' services, low qualifications amongst nursery staff and poor pay and conditions outside of the relatively small proportion of nursery classes attached to maintained schools [16]. The incoming Labour government of 1997 put expanding childcare at the heart of its agenda, largely as part of an anti-poverty strategy that saw female employment as a way of reducing child poverty for low-wage families and single parents. At the same time Sure Start was established to set up a network of local programmes providing a range of services for children under five and their families in the most disadvantaged areas of England. This had some similarities to the American Head Start compensatory education programme but there were also important differences. For example, Sure Start local programmes had a particular focus on under threes and their families and did not automatically provide daycare facilities. They were encouraged to seek the views of the local community and respond to local need, and, in order to avoid stigmatisation, the services that they

offered were to be universally accessible within the neighbourhood rather than targeted at those most in need [14].

In 2004 a national childcare strategy was launched which included a commitment to free nursery education places for all three and four year olds (though not necessarily in schools) and a range of incentives for increasing childcare availability through the Private, Voluntary and Independent (PVI) sector was introduced [10]. The target was for one million additional daycare places to be created but the government was under increasing criticism for a strategy that seemed to be 'never mind the quality – feel the width'. In 2001 Ofsted (Office for Standards in Education) had taken over the regulation and inspection of early years services in England from 150 different local authorities and for the first time imposed qualification requirements for those in charge of settings alongside national minimum standards for daycare [17]. However, the requirement was set at a level 3 National Vocational Qualification (broadly secondary school exit level).

In 2003 the first important findings from a major longitudinal study of the Effectiveness of Pre-School Provision (EPPE) were published [19]. These showed clearly for the first time in a UK context that the quality of outcomes for children was closely related to the quality of early educational experiences provided. Moreover, that the effects were more extreme on children from disadvantaged backgrounds such that, without high quality input, children starting off with broadly the same educational potential quickly diverged according to social class. Not surprisingly perhaps, EPPE also found that the quality of early years' provision in turn was highly dependent on the qualifications of staff, in particular whether or not the leader of the setting held a graduate level qualification – normally meaning qualified teacher status.

The Children Act of 2004 established the Children's Workforce Development Council (CWDC) and charged them with developing a workforce strategy to upskill the whole of the children's workforce. The initial consultations around the development of a workforce strategy were heavily influenced by the EPPE findings and first mooted the idea of universal graduate leadership for early years'

services [3]. Unlike New Zealand where a 'new teacher' model has been implemented, the UK government (and more specifically England) looked to the European tradition of social pedagogues for inspiration [18]. By 2006 the Children's Workforce Strategy [4] confirmed that government had opted for a new form of multi-disciplinary graduate professional for the PVI sector, trained in all aspects of health, care and educational development and capable of working across the birth to five age range. This contrasts sharply with Early Years Teachers whose training in the UK is across the 3 to 8 age range and whose primary focus is mainly on educational achievement [2]. Early Years Professionals were to have a status broadly equivalent to teachers, but, without the nationally recognised pay, terms and conditions and career structures of the teaching profession [12].

## 2. The design of Early Years Professional Status (EYPS)

Early Years Professional Status was to be awarded by the CWDC after validation using a centrally devised and tightly prescribed process in relation to 39 national standards. At the same time the curriculum frameworks for young children were undergoing major reform. The Childcare Act 2006 effectively abolished the distinction between care and education for young children and paved the way for the introduction of a new Early Years Foundation Stage curriculum (DfES 2007) for the birth to five age range by September 2008 which applied to all care and education settings including nursery and reception classes in schools. The government also set a target of an EYP in every PVI daycare centre by 2015 whose main purpose was to be a 'change agent' driving practice improvement and able to:

*'... lead practice in the Early Years Foundation Stage (EYFS), support and mentor other practitioners and model the skills and behaviours that safeguard and promote good outcomes for children'* [1]

The University of Northampton was one of 11 education and training providers selected to pilot the validation process for the new award in Autumn 2006 [6] and became an 'Approved Provider' delivering four different pathways to achieving EYP status from January 2007 (a fifth undergraduate pathway has since been added). The University of Northampton had already decided to work with and through local authorities, seven of whom from across the East Midlands of England are represented on its Steering Group. The model adopted was one of 'capacity building' so some local authority advisory staff, who visit and advise PVIs in the course of their work, were trained to be assessors in the first wave. Later, those who had achieved EYP status themselves were

encouraged to become assessors and mentors for the subsequent cohorts. At the time of writing, nearly 30% of our EYPS assessors and mentors for the University of Northampton are graduates of our own EYP programme who continue to work in settings throughout the East Midlands.

The EYPS pathways are designed to meet the needs of different practitioners depending on previous qualifications and experience.

1. **The Validation pathway (4 months)** is designed for graduates with a relevant degree and recent experience, including at a supervisory or leadership level, across the whole of the birth to five age range. In such cases, no additional education or training is deemed necessary and the early years' practitioner just undertakes four days of preparation for the different elements of assessment. These include an initial half day 'Gateway' assessment of communication, leadership and decision-making skills modelled on a management assessment centre experience. This is followed by submission of seven prescribed tasks based on day-to-day practice and demonstrating knowledge and competence in relation to each of babies, toddlers and pre-school children. The final component of assessment is a full-day setting visit during which evidence is observed and witnesses are interviewed. The education and training of all candidates culminates in this same validation process and the candidate files and assessor judgements are subject to a national system of external moderation.

2. **The Short pathway (6 months)** is designed for graduates with a relevant degree but some gaps in their training or experience. Typically nursery and primary qualified teachers whose training does not encompass care and education of children under three.

3. **The Long pathway (15 months)** is primarily designed for those with a vocationally related Foundation Degree in Early Years (240 credits or HE Diploma level) who need to 'top-up' with a minimum of a further 60 credits for an Ordinary Degree or 120 credits for an Honours degree before being eligible to undergo EYPS validation.

4. **The Full time training pathway (12 months full time)** is similar in structure to a post-graduate teacher training course comprising 18 weeks of intensive education/ training and 18 weeks of placements and is designed for new graduates with relatively little relevant knowledge or experience and for career changers.

5. **The fifth pathway (18 months-2 years)** was introduced, following a brief pilot phase, in October 2009 and provides a professional practice route through the third year of the BA Hons Early Childhood Studies leading, after graduation, onto a final extended professional development stage based on placements or work experience.

### 3. The challenges of implementing EYPS

When EYPS was first introduced the vast majority of the early years workforce were qualified to level 2 (lower secondary) or 3 (upper secondary levels) with very few other than teachers in schools holding degree level qualifications. The target of achieving graduate leadership of all 15,000 daycare and children's centres by 2015 was hence extremely ambitious. The challenge was not just individual professional development on a massive scale, but one of professionalization of the workforce as a whole.

As Oberhaumer [15] has argued:

*'Professionalism is a situated concept, embedded – like our understanding of children and childhood – within specific historical, socio-cultural, organisational, economic and political contexts'*

EYPS was a new status and the role of EYP did not exist previously so there was no existing professional group to identify with. A fully fledged graduate profession has taken teachers more than 50 years to achieve in the UK – progressing from largely unqualified teachers pre-war, through Certificate of Education and Diploma requirements and finally to a graduate only training programme in the 1970-80s. The early years' sector was being asked to make this transformation in less than 10 years. More significantly, the institutions involved were not state maintained schools with relatively standard classrooms and facilities and common terms and conditions of service, but small scale, dispersed and highly varied PVI settings (from community-run play groups in church halls to private day nurseries with new purpose built buildings or formal nursery units attached to independent schools) over which the government had little control. In order to 'incentivise' the PVI sector towards professionalization the government initially invested £250 million over three years in a Transformation Fund (later known as the Graduate Leader Fund) to be administered by Local Authorities. This 'carrot' would provide up to £5,000 per annum for settings to recruit a graduate, to grow their own staff into graduates, to retain graduates through pay enhancement and to support the training and development of other non-graduate staff in the setting. Nevertheless, it can still be argued that the government was trying to professionalize the workforce on the cheap because, unlike New Zealand, it shied away from making EYPs truly equivalent to teachers by establishing them on professional terms and conditions of employment. In addition, in order to meet its agenda for the affordability of childcare, the government capped the fees of all settings in receipt of funding for free nursery education places for three and four year olds making it difficult for the majority of settings to

recoup graduate-level wages from fee increases even in the more prosperous areas, whereas in poor areas demand-side subsidy in the form of the childcare element of Working Tax Credit is poorly understood and has low take-up. These factors, together with the current financial climate of cuts in all but the most essential services, threatens the long-term sustainability of employing graduates in PVI daycare settings. Of course, up the other sleeve the government has a stick in the form of regulatory requirements that can be enforced through Ofsted. Post 2015 it is widely expected that the qualification requirements for registration of daycare settings will be changed to include at least one graduate EYP on the staff and that the bar will be raised for all other staff such that a level 3 qualification will become the norm [11].

Another important factor for which, in the absence of the outcomes of large scale evaluative studies that are now ongoing, evidence to date is largely anecdotal, is the level of resentment of EYPS from long serving staff. These are managers and leaders of settings who lacked educational opportunity in their youth or were failed by the education system and now feel their years of experience to be devalued by the advent of graduate level qualifications to which they have never aspired and for whom opportunity has come too late. This resentment sometimes spills over into their treatment of aspiring graduates and EYP students on placement. This is well illustrated by a quote from a focus group of students which is the subject of discussion later in this paper.

*"In most of the private day nurseries it's so difficult to bring about...change because most of them I swear don't want it... it's like you were coming in to disrupt the other team." Full1.229*

It has been suggested elsewhere [7] that the CWDC could have helped avoid this situation by recognition of a 'grandmother principle' through which the most experienced existing practitioners might have gained EYPS status (in the absence of an academic degree) through a system of Accreditation of Prior Experiential Learning based on a portfolio of evidence of their life's work. It is not unusual during the creation of new professions for such systems to be put in place for a short period and then phased out as full education and training requirements become widely established (for example, Higher Education Academy membership in the UK).

### 4. EYP roles and identity

Just over three years into the implementation of EYPS some 4,000 candidates have achieved the status in the UK (250 through the University of Northampton) and a further 3,000 are currently undergoing training. The pace of achievement of the



status is speeding up now that large numbers of practitioners are starting to graduate from the work-based Foundation Degrees in Early Years and the project on course for achieving the target of 20,000 EYPs by 2015. However, there are still a number of questions and concerns surrounding the status. First and foremost of which is what difference does the status make? This question can be considered on a number of levels. At one level, a large scale impact evaluation, funded by the CWDC, is being carried out nationally by Wolverhampton University and is due to report at the end of 2010. On another level, it is possible to ask on a small scale whether or not having EYP status has made any difference to the lives of experienced practitioners and whether a distinctive EYP role and identity can be identified or is emerging.

This latter was the subject of a small scale qualitative study based on five hour-long focus groups involving (a) experienced practitioners who had become EYPs in the first wave, (b) students at the end of the Full-time training pathway who were about to become EYPs and (c) workforce development officers from Local Authorities whose job it is to ensure an EYP in every daycare setting in line with government strategy [9]. A standard set of questions were posed to structure the discussion:

- What do you see as the **core** role of an EYP?
- How does the EYP role differ from that of other EY practitioners?
- How does the EYP role differ from that of other professionals?
- What does being an EYP mean to you personally?
- Any other issues that you want to discuss?

The focus group discussions were carried out in June – July 2009. Recordings were transcribed and a simple thematic approach taken to analysis.

The first main finding was that, although students, practitioners and work-force development officers could all articulate the role expectations set down by the CWDC, a distinct role of EYP did not as yet exist.

*“I don’t think in the work place there is an EYP role ...well it’s not advertised...it’s always nursery nurse, head of room like” (full1.70)*

*“I don’t think it’s that distinct yet, is it? ... because even within our network, we’ve all got such different roles ...if we’re managing a setting, there’s other people who are managing settings who are not EYPs and, if it’s your own business - there’s lots of business people who are not even Early Years people running this.” (leic3.267)*

*“I mean in lots of ways the role’s still emerging, isn’t it? You know, it’s evolving.” (leic3.1879)*

Students particularly found this lack of a distinct role and identity frustrating.

*“With teachers when they are training they are not classed as students, they are classed as trainee*

*teachers, yeah... just the terminology is completely different...we are not trainee professionals, we are students.” (full1.896)*

*“...isn’t that because everyone knows what a teacher is trying to do... whereas people go ‘what is an EYP?’” (full1.909)*

*“Like you say, there’s not many people at the moment that even know what an EYP is.” (full1.224)*

The second main finding was that students and experienced EYPs appeared to be operating according to different models of professionalism. Students appeared to adhere to what might be described as a managerial/technical model that prescribes standards and outcomes and sees EYPs, or indeed teachers to whom Moss would argue this also applies within current government policy, as ‘...technicians trained in right answers, not professionals trained to reflect and question.’ [13]. This can be illustrated by the following quotes from the Full-time training group:

*“Somebody who leads and supports all of them and tries to change, I mean practice, by being a good role model, and observing to see if there are areas you can change really” (full2.58)*

*“After reading guidance, because I believe in, you know, in **doing things by the book**, my role includes, I mean, leading and supporting, changing situations, you know, so that’s what I’m going to be doing” (Full2.206)*

Experienced practitioners, on the other hand, tended towards what Oberhuemer describes as a democratic professionalism model ‘...based on participatory relationships and alliances between professionals and other stakeholders’ [15]. Their discussions emphasized personal responsibility for quality and continuous evaluation and improvement but also the importance of inspirational leadership and empowerment of others:

*“I think an EYP is someone who is really passionate about their work. Who’s got completely, utterly interested in early years and improving the quality of it all the time” (82)*

*“I suppose what we’re really saying is that an EYP is someone who is always self-evaluating and looking to move forward, aren’t they? And being open to new ideas” (138)*

*“To me it’s more of an equipping role – to help people emerge as being really excellent in this field... you’ve got to get them to value themselves first” (leics3.1979)*

*“So it’s an **inspirational** role” (460)*

*“Yes...To try and allow people to value themselves enough to say ‘actually I want to go on that training because I want to better myself’, not because I’ve been told to do so” (leics3.1992)*

*“...and it’s **empowering** other practitioners to move forward” (503)*

The experienced EYPs also demonstrated professional autonomy and a mature democratic professionalism through their confidence to question and challenge practice and directives. This is well illustrated by what they said.

*"You need to know what the benefits of change might be ...I think it is important to have the confidence to say 'well, I'm not going to have this just because I've been told to have this' ... 'I will decide to have this on the basis of...' "* (Leics3.2351)

*"I've done exactly the same. I've had things thrown at me from the improvement advisers... and I said 'I'm not going to because I believe this is about our ethos, this is what I believe about the children that we have here and we do this for a reason'"* (leics3.2366)

In contrast the student/ trainees, perhaps not surprisingly, lacked this self confidence and felt that authority to challenge and change came from appointed positions in the hierarchy.

*"It's like if the manager says something you have to do it because she's the manager whether you fully agree with it or not. Whereas if you haven't got that status kind of thing then it's hard ... they can still turn round and say no"* (full1.429)

## 5. Conclusion

The introduction of EYPS is still less than four years old and this small scale study shows that as yet there is no clear role, identity or recognition associated with the new status. The differences in the models of professionalism adopted by students and experienced EYPs could just be put down to confidence that comes with experience and with fully internalising the knowledge and values of professional training. Certainly the experienced EYPs in this small sample admitted that they had been surprised themselves with the impact that the professional updating and validation process had achieved.

*"Before I was reluctant...to progress professionally, I think really because I was in my comfort zone and very happy...It was actually probably the research part of it and the actual writing the assignments...it brought this knowledge and sort of, like you say, consolidated why I'm doing this."* (leic3.308)

What is also evident from the increasing number who are now active in local networks and who continue to engage with the University as mentors and assessors or through open lectures and conference attendance, is how much EYPs value the chance to meet and to discuss their work with like-minded individuals. Unlike teachers, the vast majority of EYPs work in small scale, isolated, PVI settings in which they are the **only** person qualified to graduate level. Membership of a community of practice can

only be achieved by looking outside the setting and networking with others. Without moral support and intellectual stimulation from outside, newly qualified EYPs will inevitably become isolated and may find it hard to sustain enthusiasm for continuous improvement. The long term success of the implementation of EYPS in raising standards in the PVI sector may, therefore, be as dependent on consolidating professional identity and building support networks as it is on solving the financial problem of sustainability of graduate level salaries.

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## **Session 4: Higher Education**

Student's Perception of Quality in Higher Education in Nigeria  
(Nifarta Peingurta Andrew)

The Accreditation and the Systems of Indicators in the European Space for Higher Education  
(Jesús Freire Seoane, Mercedes Teijeiro Álvarez)

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# Student's Perception of Quality in Higher Education in Nigeria

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## Abstract

*Student's perceptions surveys of university course experiences and learning environments has been part of quality evaluation in higher education in Australia and UK for the purpose of accountability, learning improvements or both. In Nigeria, it has not been so and so this article describes a research about the student's evaluation of the quality of their course experiences and learning environment in the universities. The article examines the factor structure of a modified student's course experience questionnaire (SCEQ) in Nigeria and investigates the similarities and differences in student's perceptions across different variables. It is based on a survey of 3,400 undergraduate students of all levels from five degree courses in faculty of sciences of 17 universities in Nigeria. Findings from exploratory factor analysis supports the scale structure of the nine subscales of a modified version of SCEQ (good teaching, clear goals, course level materials and resources, emphasis on independence, appropriate workload, appropriate assessment, surface learning strategy, deep learning strategy and generic skills). This study could provide a basis for gender, degree courses, level of study, cross university, and international benchmarking. While there was variation of student's perception across many variables, students who perceived their courses and learning environment most favorably adopted a deep learning strategy, acquired better generic skills and were most satisfied with their courses as shown by correlation analysis. This information could be useful in informing the design of degree course-specific programs.*

## 1. Introduction

Within the Nigerian higher education system, a considerable amount of time, resources and energy is being spent on universities academic programme accreditation periodically. Evaluators of university programmes sent by the National University Commission (NUC) go round all the Nigerian universities in order to evaluate the quality of programmes run within the universities as part of quality evaluation of higher education in Nigeria [1]. Programmes are evaluated and scored based on the following criteria: staffing (32 points), academic content (23 points), physical facilities (25 points),

library (12 points), funding, (5 points), employer's rating (3 points). From the criteria mentioned above, none focuses on the student's legitimate voices and no attention is being given to the student's perception of the quality of their course experiences and learning environment in these universities. Moreover, the results of these accreditation exercises were merely used for university rankings purposes only, which most often does not translate to quality programme, quality course experience, quality assessment procedures and quality learning improvement across these universities [2].

In contrast, universities around the world are exploring the use of teaching and learning performance indicators that solicits for student's perceptions about the quality of aspects of their course experiences, teaching and learning environment for performance – based funding, learning improvements and for benchmarking purposes [3], [4], [5] and [8]. For example in countries like Australia, the Graduate Career Council of Australia has since 1993 included the Course Experience Questionnaire (CEQ) as part of its annual Graduate Destination Survey for the improvement of the quality of teaching in the Australian higher education sector and even UK has also developed a similar national survey [6], [7]. Apart from these, the results of the CEQ are used widely by a range of stake holders, including the Australian Commonwealth Government, researchers in higher education, prospective students and tertiary institutions via the Good Universities.

Perusing through bulk of research done in the area of quality evaluation in higher education in Nigeria, very few solicited for the perception of students on issues of quality in higher education and even among the few; only a very negligible number did an extensive quantitative work in the area of quality evaluation of teaching and learning environment in higher education in Nigeria [14]. In view of the above, this study tries to address this problem by entirely soliciting for the student's perception of the quality of aspects of their course experiences and learning environment, using the Student Course Experience Questionnaire (SCEQ) which we developed according to the style of questions found by researchers with the view of examining the factor structure of a modified version of the SCEQ and exploring variations and similarities of student's perceptions across type of

university, university generation, level of study, degree course of study and gender [6], [7], [10]. The study will also demonstrate the link between the student's perception of the quality of aspects of their course experiences and learning environments with their learning strategy, skills acquired and their general satisfaction with their courses.

## **2. Student's perception of quality of course experiences and learning environment**

Student perception studies are intended to be used as an indicative source of information about the student's experience from their own perspective and judgment. Being active beneficiaries of the teaching and learning that goes on in the university system, their opinion about the quality of their experiences and learning environment on which they are validly able to comment on provides insights as to how and where to improve the quality of courses and learning environment in higher education system. Most recent researchers in the area of student evaluation of quality in higher education have focused on student's perceptions of course experiences and learning environment across their entire degree and how these perceptions are related to approaches to study and subsequent learning outcomes. For example, the CEQ is derived from the student learning framework, which holds that student's approaches to study are contingent upon both their prior experiences of teaching and learning and their perception of current learning context, in turn affecting learning outcomes [8], [9]. The CEQ assess a range of graduate's perceptions related to teaching and learning as well as overall satisfaction as validity in a variety of settings. [10], [11].

Similarly, the Student Course Experience Questionnaire (SCEQ) [8] and [12] focuses on current students not graduates and sought to establish inter-rater agreement within faculties for each of the SCEQ scales, justifying aggregation of lower level scores to represent scores at the higher level; thereby making the SCEQ scales to be used as performance indicators of undergraduate teaching quality at the faculty level. Ginns et al. also noted that the SCEQ replicated the factor structure of the CEQ showing that the SCEQ has a clear, interpretable factor structure for undergraduate students [8].

On a general note, most studies using the Student Course Experience Questionnaire (SCEQ) focus on the student's perception of the quality of teaching, clarity of goals and standards, appropriate workload, appropriate assessment, independence, and generic skills; and how these perceptions relate subsequently to the student's approaches to learning. Students have been shown to adopt either a surface approach to study (focusing on short term reproduction) or a

deep approach to study (focusing on longer term understanding) [9].

There is a substantial body of literature confirming the factor structure of both the CEQ and SCEQ within teaching and learning context in the west [6], [7], [10] and [15] and the scales used by [16] collectively defined a single higher-order factor that could be interpreted as a measure of perceived academic quality. The CEQ and SCEQ has been used has been used within the context of perceived academic quality for benchmarking, as a performance indicator, for summative funding and formative purposes [8]. It has also been used by individual universities to formatively evaluate and improve their undergraduate programs [5] and because there is evidence showing that students are best placed to evaluate many aspects of teaching and learning, and their own ratings are valid, multidimensional and reliable [17], student course experience can be considered to be quite strongly related to qualities of the actual study context.

## **3. Methodology**

### **3.1. Sample**

The Nigerian university system is categorized in to three types (private, state and federal universities) and in to five generations (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> generations). 3,400 questionnaires were randomly administered to undergraduate students of the faculty of sciences in five degree courses at all levels (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> level) [1], [2]. The survey covered 17 out of 92 (18.5%) Nigerian universities representing the six geo-political zones of Nigeria in the period April-July, 2008; which marks the end of the 2007/2008 session in the Nigerian higher education system. A total of 2,221 usable responses (response rate of 65.3%) were obtained, and a minimum institutional response rate of 30% was also achieved. The whole survey comprised of 41.7% and 32.6% male and female response rate respectively. The university type response rate stood approximately at 7.4% for private universities, 22.4% for state universities and 35.6% for federal universities. 9.5% of the responses came from first year level students, 13.4% from the second year level students, 20.9% from the third year level students and 21.6% from the final year students. Course response rate were, 22.4% for chemical sciences, 15.5% for biological sciences, 9.8% for computer sciences, 16.7% for mathematical sciences and 0.9% for "others". Finally, 9.6% responses were for 1<sup>st</sup> generation universities, 18.4% for 2<sup>nd</sup>, 18.1% for 3<sup>rd</sup>, 11.9% for 4<sup>th</sup> and 7.3% for 5<sup>th</sup> generation universities.

### 3.2. Data collection and instruments

The modified SCEQ was available in paper version and was made up of 61 items corresponding to good teaching, clear goals, course level materials and resources, independence, appropriate workload, appropriate assessment, surface learning strategy, deep learning strategy, generic skills and the last item measures the general satisfaction of student with their degree courses. The students responded to each of the 61 items by indicating their agreement or disagreement with a particular statement along a 5-point scale. (1 = strongly agree to 5 = strongly disagree). Prior to the data collection for this study, the modified SCEQ was piloted among undergraduate students who came from different degree courses in the faculty of sciences of two universities in Nigeria. The items were slightly modified to fit in to the Nigerian context and the choice of the faculty of sciences was as a result of its common structure in all the selected universities in the sample as this will enable comparisons. Responses to negative items in the modified SCEQ were reversed before analysis. Additional data that provided some background information on the participants were also gathered.

### 4. Analysis of findings

Exploratory Factor Analysis (EFA) using SPSS 13.0 was used to test the structure of the first 60 SCEQ items. This included reliability analysis of each of the SCEQ scales using Cronbach's alpha coefficient in order to determine the internal consistency of the scales. The EFA was conducted using principal components factor analysis (PCFA) with varimax rotation. The choice of principal component factor analysis provided a basis for direct comparison with the pilot study and with those from 1992 to 1994 student samples [6], [7]. The varimax method of rotation is recommended where items are assumed to be correlated with each other. Given the evidence of positive and moderate inter-correlations demonstrated between the CEQ scales, a varimax rotation was deemed fit for the analysis of this study and a combination of the scree test and the eigenvalue >1 rule were used for determining the appropriate number of factors to be extracted. Factor loadings of 0.3 and above were selected for interpretations. Results from the reliability analysis of the scale of this study were compared with those from [6] and [7]. Results of the PCFA with varimax rotation method of the first 60-item produced a very stable and virtually 9 factor solution which accounted for 57.6% of the variance. Two items of good teaching cross loaded on generic skills and one on course level materials and resources, while one item of the course level materials and resource cross

loaded on emphasis on independence. One item of surface learning strategy cross loaded on appropriate assessment and one item of clear goals and standards cross loaded on good teaching. One item of appropriate workload cross loaded on emphasis on independence and one item of deep learning strategies cross loaded on generic skills. One item each of emphasis on independence cross loaded on good teaching and generic skills respectively. Finally, one item of appropriate assessment loaded on surface learning strategies. (Table of PCFA results and a copy of the modified SCEQ is not included because of lack of space, but can be sent on request). Results of reliability analysis shows more convincing evidence of stability of the modified SCEQ used in this study when compared with those from Ramsden [6] and with those from 1992 to 1994 student samples of Wilson et al. [7] (see Table 1). Descriptive statistics and analysis of variance (ANOVA) were conducted at different levels of aggregation in order to examine the extent to which it revealed differences or degree of variation in student's perception of the quality of aspects of their degree courses and learning environment across different comparative groups. Significant variations in student's perceptions that revealed important patterns in student's perceptions were seen across the university types, university generations and degree courses, level of study and gender in almost all the sub-scale of the modified SCEQ. (Table of results not included here because they are many, but can be sent on request).

Correlation analysis was conducted between student's perception (measured by the sub-scales of the SCEQ) and reported learning strategies (measured by the surface and deep learning strategy sub-scales of the SCEQ) with results revealing two dimensions; one dimension significantly relating some of the SCEQ sub-scales positively to deep learning strategy and the other dimension significantly relating some of the SCEQ sub-scales negatively to surface learning strategy. The obtained results obtained were compared with the 1993 sample (see Table 2). The result of correlation between student's perception and generic skills revealed strong significant positive correlation in almost all the SCEQ sub-scales and is being compared with other results (see Table 3). Similarly, correlation between student's perception and student's satisfaction with their degree courses (measured by the last item of the SCEQ) showed significant positive correlation as is being compared (See Table 4).

**Table 1. Cronbach's Alpha Coefficient for the present study compared with those from Ramsden**

CEQ scale	Ramsden (1991)	Wilson et al., (1997)			Present study
		1993 student sample	1994 student sample	1992 student sample	
Clear goals	0.80	0.82	0.82	0.76	0.72
Course resources and facilities	-	-	-	-	0.73
Good teaching	0.87	0.86	0.88	0.88	0.85
Emphasis on independence	0.72	0.68	0.67	-	0.61
Appropriate workload	0.77	0.75	0.74	0.69	0.79
Appropriate assessment	0.71	0.74	0.73	0.70	0.65
Surface learning	-	-	-	0.69	0.75
Deep learning	-	-	-	0.67	0.73
Generic skills	-	0.80	0.79	0.77	0.88

**Table 2. Correlations between learning strategies and student's perception of quality**

Sub-scales of Course Experience Instrument	Surface learning strategy			Deep learning strategy		
	Trigwell & Prosser, (1991)	Wilson et al., (1993 student sample)	Present Study	Trigwell & Prosser (1991)	Wilson et al., (1993 student sample)	Present Study
Clear Goals	-0.24	-0.29	-0.26**	0.10	0.12	0.41**
Course Level Resources	-	-	-0.07**	-	-	0.07**
Good Teaching	-0.10	-0.34	-0.29**	0.15	0.24	0.43**
Emphasis on Independence	-0.27	-0.29	-0.19**	0.02	0.19	0.05**
Appropriate Workload	-0.45	-0.48	-0.35**	0.04	0.07	0.04*
Appropriate Assessment	-0.43	-0.47	-0.51**	0.17	0.21	0.01
Generic Skills	-	-0.20	-0.10**	-	0.37	0.62**

n = 2,221; \*\* correlation is significant at 0.01 level; \* correlation is significant at 0.05 (2-tailed). Correlations  $\geq 0.20$  are used for interpretations of results.

**Table 3. Correlations between generic skills and student's perception of quality of course experiences and learning environments compared with results from Wilson et al.**

Sub-scales of Course Experience Instrument	Generic skills			
	Wilson et al., (1993 student sample)	Wilson et al., (1994 student sample)	Wilson et al., (1992 graduate sample)	Present study
Clear Goals	0.33	0.30	0.29	0.51**
Course Level Resources	-	-	-	0.14**
Good Teaching	0.46	0.48	0.40	0.55**
Emphasis on Independence	0.41	0.40	-	0.12**
Appropriate Workload	0.16	0.15	0.02	0.10**
Appropriate Assessment	0.35	0.37	0.20	-0.08**

n = 2,221; \*\* correlation is significant at 0.01 level, Correlations  $\geq 0.20$  are used for interpretations of results

**Table 4. Correlations between General Satisfaction with Course and the Sub-scales of the Course Experience Instrument compared with results from Wilson et al.**

Sub-scales of Course Experience Instrument	General Satisfaction with course			
	Wilson et al., (1993 student sample)	Wilson et al., (1994 student sample)	Wilson et al., (1992 graduate sample)	Present study
Clear Goals	0.55	0.55	0.50	0.42**
Course Level Resources	-	-	-	0.24**
Good Teaching	0.64	0.64	0.63	0.47**
Emphasis on Independence	0.54	0.51	-	0.11**
Appropriate Workload	0.33	0.36	0.17	0.14**
Appropriate Assessment	0.47	0.41	0.33	-0.12**
Generic Skills	0.50	0.51	0.47	0.66**



## 5. Discussion

Indicators of the quality of teaching and learning in higher education are constantly sought for by government, employers and the public for accountability and the demand for quality outcomes [4], [5], [8], [15] and [16]. One of such quality outcomes demanded is that students are adopting deeper learning strategies for a better overall learning experience. Knowing the contribution that student's perception of the quality of their course experience and learning environment can make on learning strategies, which in-turn improves their learning outcomes; it became important that such studies as this should also be conducted in a non-western context such as Nigeria. Findings provided support for the scale structure with Nigerian undergraduate students regardless of university type, university generation, degree courses, level of study and gender. Reliability coefficients of the scales of the modified SCEQ were consistent when compared with those from Wilson et al. and Ramsden [6], [7]. Although the PCFA showed that the 61 SCEQ items cross loaded on scales other than their hypothetical scales, such cross loadings were more from the good teaching scale, a pattern seen in previous studies. Hence, the modified SCEQ is applicable for use with Nigerian undergraduate students.

An investigation of the variation of student's perception of quality of their course experiences and learning environment across comparative groups revealed some interesting results, among which a significant variation is revealed in all the SCEQ scales across university type and university generation. It has been revealed that students from the private type and 5<sup>th</sup> generation universities perceived the quality of their course experiences and learning environments in more scales than any of other type or generation of university. This result, though in the Nigerian context, is in resonance with the results found by Ramsden [6] and Richardson [10] where they proved and concluded that departments teaching degree in the same subject in different institutions of higher education would vary in the quality of their experiences and learning environments. With reference to the variation across level of study, though this is a situation that is peculiar to this study only, yet we can deduce some important results that could be further elaborated in future studies. In studies like this we must expect variation in student's evaluation of the quality of their courses and learning environments across levels of their studies. Student's of higher levels are expected to perceive their course experiences and learning environment better than students of lower levels, since they have been longer in the system than those in levels below them. Results from this study therefore supported this expectation and those students from the final year level of studies evaluated

better five sub-scales (clear goals, good teaching, appropriate workload, deep learning strategy and generic skills) out of the nine sub-scales of the instrument of this study while students from the first year level of studies perceived better four out of the same nine sub-scales (course level resource and facilities, emphasis on independence, appropriate assessment and surface learning strategy. Some interesting results to note here is, because the first year level students are new to the university system, they perceived the adoption of a surface learning strategy better than students from other levels of studies. On the other hand, because the final year students have been in the university system for some considerable number of years, they perceived clarity of goal and the adoption of a deep learning strategy better than those from the other levels of studies. The two intermediate levels of studies did not evaluate any sub-scale better than the other levels. The evaluation of the sub-scales is distributed between the two extremes. These two extreme distributions suggests that at the port of entry in to the university system, the student's perception of the quality of their courses is bound to be shallow due to a little understanding of the system at such stage, but as they advance in level of studies their perception about same aspects begins to change to a deeper one because they must have gained a better understanding of the system than when they began. This observation can as well be a basis for future research in to the ability of the Student Course Evaluation Questionnaire (SCEQ) to provide information about change or stability in student's perception of the quality of their courses and learning environment over time when a cohort of students is being considered from the first level of studies to the final level of studies in an institution. There existed no significant variations across gender in all the sub-scales except for the appropriate assessment and the surface learning strategy. This could be ascribed to the fact that variation in the appropriate assessment and learning strategy across gender depends on the approach of an individual to them. The way a female student adopts a learning strategy and approaches examinations is certainly quite different from the way a male student will. Moreover, there have been records of gender disparity in many aspects of higher education in Nigeria. For example, in the aspect of accessibility and equity in higher education; there has been a standing gap between the male and the female students. Therefore in most of the higher institutions like the universities, there is more male representation than the females and this can surely affect and cause variation in any evaluation that is gender oriented in the Nigeria's university system. An interesting finding of the correlation between student's perception and learning strategies in this study related all the scales to surface learning

strategies negatively and to deep learning strategies positively; meaning that those students who perceived the quality of their course experience positively adopted a deep learning strategy and those students who perceived it negatively adopted a surface learning strategy. This finding is also consistent with those found in previous studies [6]. The positive strong correlation between the student's perception and the generic skills and that between the student's perception and overall satisfaction reveals that the more students perceived the quality of their course experience and leaning environment better, the more they are likely to acquire generic skills and the more they are also likely to be satisfied with their degree course of study.

## 6. Conclusion

With the evidence of a stable structure of the modified SCEQ with the Nigerian undergraduate students, the SCEQ could be a reliable instrument for the evaluation of quality in higher education in Nigeria in terms of teaching quality, clear goals and standard, course level materials and resources, emphasis on independence, appropriate workload, appropriate assessment, learning strategies and generic skills. While perceptions of course experience and learning strategies varied among sub-groups of variables, differences could inform the specific needs of degree courses in the design of a new or re-design of current curriculum in Nigeria. Adopting the SCEQ in Nigerian universities will provide basis for international benchmarking purposes in the future. Future research on the construct validity using confirmatory factor analysis will further validate the factor structure of the SCEQ for use in Nigeria and benchmarking across Africa at large.

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# The Accreditation and the Systems of Indicators in the European Space for Higher Education

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## Abstract

*With the arrival of the European Space for Higher Education (ESHE) universities have had to adapt their systems of qualifications in such a way so that they can be comparable with the others and so that a previous check can be obtained to demonstrate that they possess the adequate requirements of quality. During this whole process the accreditation systems not only work as a model of quality assurance, but also they allow information to be generated about the institutions and programs that they accredit. In this paper we will review the quality guarantee present in the ESHE, the role of accreditation in this process and the most common standards. Our contribution to knowledge is a proposal for evaluating the quality of institutions of higher education, respecting their diversity and autonomy. We will conclude by setting out the future challenges to be faced by the ESHE as far as quality is concerned.*

## 1. Introduction

In the last few years universities have undergone a process of structural change, with the objective of harmonizing the European higher education system. With the Bologna Declaration in 1999 the member states of the European Union were urged to adopt a system of qualifications that is understandable and comparable with the others and that a greater international competitiveness of the European educational system should be promoted. They have to establish a credit system such as the European Credit Transfer System (ECTS) to promote greater student mobility. They have to promote mobility and remove obstacles to the realization of the right to free movement of students,

teachers and administrative staff of universities. It is necessary to enhance the promotion of European cooperation to ensure a quality level for the development of comparable criteria and methodologies. This process has culminated with the entry in the European Space for Higher Education to encourage mobility and employment opportunities and in which national identities and common interests can interact and be strengthened by promoting the overall development of Europe. These changes are leading universities to take on new roles, and to an increasing focus on quality, with implications in their structure and functioning.

## 2. Literature Review

The word university comes from the Latin "universitas", and refers to the collective aspect of a community or corporation. The "Universitas magistrorum et scholarium" referring to our current universities understanding them as organizations dedicated to education.

Many ancient civilizations such as classical Greece and the civilizations of Mesopotamia and Egypt, have had higher education centers. In all cases, we can find quality vestiges of understanding it, as control criteria of content and their validation, but the University as an institution emerged in the Middle Ages in Europe and later extends throughout the world [8].

The University in the pre-Renaissance has had an instrumental role, serving the needs of powerful urban elites (political, religious and commercial). It is this practical limitation that required the regulation of the content of their institutions and standards of teaching practice in order to be recognized publicly. From the fourteenth century there is a decline in universities, despite the progressive internationalization and the increase in the common criteria that produced the strong Jesuit

participation in these institutions. The reasons for this decline is due, mainly, to increased conflicts between church and state under the feudal monarchies.

In the seventeenth and eighteenth century the university is characterized by low institutional profile with low quality standards and widespread corruption. This situation continued well into the nineteenth century.

In this new period the university was characterized by its degree of political cohesion. Higher education, which for years was reserved for social and economic elites, is made accessible to a greater percentage of the population. Universities are considered, as state institutions, which to get degrees titles must meet the founding statutes, regulations and minimum standards. University programs are designed to satisfy the manpower needs perceived by the bureaucracy. This approach was known as The French University Model and had international influence [1].

In the early nineteenth century, the main rival of this model arises in Germany, where Wilhelm von Humboldt was commissioned to create an innovative university that would revitalize the intellectual dimension of the nation. This institution should fulfill the role of collaborating with the state and the practical activity of citizens. The vision of Wilhelm von Humboldt, where the university as an institution was linked to education and research for the benefit of society, was welcomed in many OECD countries [6].

For its part, the British University Model was characterized by its independence from the church, its strong local support and its slight presence in the state. In the late nineteenth century the state's role intensified with the policy of granting scholarships and grants and funding provided to new institutions of science and technology. With the creation of the University Grants Committee in 1919, the state's role in the university is enhanced, thereby initiating a growing state influence in consolidating the institutions of quality assurance in the early twenty-first century.

In its beginnings, the American University Model is based on the British Model, and just as happened with Europe, the political, cultural and geographical situations shape these institutions helping to create an open and innovative university culture which, in turn, maintained the traditions of the British Model fulfilling their quality standards [3].

At present the concept of quality has evolved to focus on the concept of "total quality" where quality is no longer restricted to scientific production, but includes the programs, teachers, students, organization of institutions, planning, orientation of the university towards the customers, etc,[2].

Having seen the evolution of the concept of quality we can now conclude that total quality is based on the following ideas:

- Customer satisfaction is the most important whether they be the students, the organization or society as a whole.

- The total quality process starts by identifying problems and shortcomings and proposing specific solutions.

- Quality management is based on the continuous development of comprehensive plans, not the simple execution of individual or specific actions.

- Decision making should be carried out as a result of data and evidence, not based on assumptions and opinions. Therefore, it is necessary to evaluate.

- Total quality involves the entire organization, depends primarily on people and it is therefore important to consider the responsibility for work, training people, teamwork, etc.

Participants at the World Conference on Higher Education in 1998, indicated which necessary elements should be integrated into the concept of quality as a whole. They refer to it as a multidimensional concept that includes teaching, research, personnel, students, institutions, etc, focusing on the importance of internal self-evaluation and external review. In said conference it was recommended that higher education institutions redefine their missions, so as to involve all sectors of the university and so that they are approved by society. Regular evaluations are recommended to be conducted comparing what the institutions are really achieving with the objectives that were trying to be met.

With the Bologna Declaration in 1999 the member states of the European Union were urged to adopt a system of qualifications that is understandable and comparable with the others and that a greater international competitiveness should be promoted of the European educational system. In this declaration the European Space for Higher Education is to be accomplished in the period fixed up to 2010.

### 3. Analysis of Findings

We can distinguish two types of quality, internal and external quality. An organization possesses an internal quality assurance when it has mechanisms to identify whether it fulfills its objectives and standards, and has an external quality assurance when the aforementioned quality is being supervised by an organism external to the institution.

Accreditation as a form of evaluation of quality present in universities has existed for over 20 years and is the most used method for measuring the quality guarantee in the most developed countries. It has arisen as a mechanism for confronting institutional evaluation and as a consequence of the search by the institution for a good performance and the need for information by its users.

The goals of accreditation can be summarized by the following aspects:

- Guarantee the user of the university system that the quality of the institutions of higher education fulfills the minimum quality requirements regarding inputs, processes and results.
- It provides transparency about the quality levels of the different institutions and programs.
- The identification of weaknesses in the course of the accreditation process will allow the adoption of corrective measures and improve the quality of the same institution, in this way the interest in the present quality will be stimulated.
- The competitive spirit resulting from accreditation allows for the stimulation of the quality of the institution.
- The recognition of credentials stimulates institutional, national and international mobility among students.

Several types of accreditation exist: the model of institutional accreditation in which the complete institution is evaluated (educational and administrative practices, evaluation of the students, facilities, etc) and specialized accreditation that centers on the evaluation of the programs. Any one of them uses general quality standards, (some general, basic or excellence), that are used as benchmarks and others more specific, which represent the minimum level of quality of the institutions and programs evaluated.

For every standard the public and private organisms develop a list of indicators that work as

a point of reference and that serve to evaluate the university as an institution or their programs [7]. A good system of indicators has to integrate a set of indicators that give an idea of the whole system or educational process. The fact that certain indicators are not fulfilled is not sufficient motive to refuse the accreditation, whereas not reaching the basic standards of quality can result in the withdrawal of the accredited status [4].

The system creation of valid and trustworthy quality indicators with capacity to generalize is an alternative solution to the need for structuring the concept of university based on different conceptual dimensions (educational methodology, education results, resources, services, management, investigation results ...). In addition, these systems of indicators can help us to design, together with other aspects, a good system of university quality evaluation [9] [10] [11].

The construction of a Higher European Education means that essential elements will come together to allow a coordinated functioning, but always respecting the diversity of different states and the autonomy of the same university. When there is no international directive that informs of which accreditation model should be used, every country adopts its own list of indicators based on the established standards.

In spite of this fact, there is a general consensus on which characteristics must be observed by a system of indicators:

- In choosing the system of indicators we have to take into consideration the strategical areas for the improvement of quality, the goals to be reached and its measures.
- To evaluate the productivity of the different institutions of higher education, certain indicators of efficiency have to be used, that allow us to consider the available options of investment.
- The measures of input and output allow us to evaluate the workload of the institution, the demand for services and the effort in their intermediation.
- To evaluate the efficiency of the university with a view to its key customers in relation to the achievement of its goals, we use the indicators of outcomes.
- The number of standards and indicators has to be sufficient to collect the most important information, but it shouldn't be very extensive in order to facilitate the establishing and improving the quality of these institutions.

- It must be used the available systems of information at present and stimulate new mechanisms of information that improve the measures of higher education performance.

The process assessor consists of two phases, an internal evaluation carried out by the own institution and another external evaluation realized by some accredited external agency to the same.

In the Berlin communiqué of 19 September 2003 the Ministers of the Bologna Process signatory states invited the European Network for Quality Assurance in Higher Education (ENQA) to develop ‘an agreed set of standards, procedures and guidelines on quality assurance’, and ‘to explore ways of ensuring an adequate peer review system for quality assurance and/or accreditation agencies or bodies’. The main results and recommendations of the report are:

- There will be European standards for internal and external quality assurance, and for external quality assurance agencies.
- European quality assurance agencies will be expected to submit themselves to a cyclical review within five years.
- There will be an emphasis on subsidiarity, with reviews being undertaken nationally where possible.
- A European register of quality assurance agencies will be produced.
- A European Register Committee will act as a gatekeeper for the inclusion of agencies in the register.
- A European Consultative Forum for Quality Assurance in Higher Education will be established.

The European Association for Quality Assurance in Higher Education (ENQA) has established several standards for institutions providing a framework for internal evaluation process. These standards are universal, valid for all European institutions, regardless of structure, mission, size or national system which they have. European standards for internal quality assurance include the following seven aspects [5]:

Policy and procedures for quality assurance: Institutions should have a policy and associated procedures for the assurance of the quality and standards of their programmes and awards. They should also commit themselves explicitly to the development of a culture which recognizes the importance of quality, and quality assurance, in

their work. To achieve this, institutions should develop and implement a strategy for the continuous enhancement of quality. The strategy, policy and procedures should have a formal status and be publicly available. They should also include a role for students and other stakeholders.

Approval, monitoring and periodic reviews of programs and awards: Institutions should have formal mechanisms for the approval, periodic review and monitoring of their programmes and awards.

Assessment of students: Students should be assessed using published criteria, regulations and procedures which are applied consistently.

Quality assurance of teaching staff: Institutions should have ways of satisfying themselves that staff involved with the teaching of students are qualified and competent to do so. They should be available to those undertaking external reviews, and commented upon in reports.

Learning resources and student support: Institutions should ensure that the resources available for the support of student learning are adequate and appropriate for each programme offered.

Information systems: Institutions should ensure that they collect, analyse and use relevant information for the effective management of their programmes of study and other activities.

Public information: Institutions should regularly publish up to date, impartial and objective information, both quantitative and qualitative, about the programmes and awards they are offering.

European standards for the external quality assurance of higher education are as follows [5]:

Use of internal quality assurance procedures: External quality assurance procedures should take into account the effectiveness of the internal quality assurance. Development of external quality assurance processes: The aims and objectives of quality assurance processes should be determined before the processes themselves are developed, by all those responsible (including higher education institutions) and should be published with a description of the procedures to be used.

Criteria for decisions: Any formal decisions made as a result of an external quality assurance activity should be based on explicit published criteria that are applied consistently.

Processes fit for purpose: All external quality assurance processes should be designed

specifically to ensure their fitness to achieve the aims and objectives set for them.

**Reporting:** Reports should be published and should be written in a style, which is clear and readily accessible to its intended readership. Any decisions, commendations or recommendations contained in reports should be easy for a reader to find.

**Follow-up procedures:** Quality assurance processes which contain recommendations for action or which require a subsequent action plan, should have a predetermined follow-up procedure which is implemented consistently.

**Periodic reviews:** External quality assurance of institutions and/or programmes should be undertaken on a cyclical basis. The length of the cycle and the review procedures to be used should be clearly defined and published in advance.

**System-wide analyses:** Quality assurance agencies should produce from time to time summary reports describing and analysing the general findings of their reviews, evaluations.

#### **4. Contribution to Knowledge**

Until rather recently, the European systems of higher education have been characterized by opacity, little transparency, was generally as a result of its bureaucratic and official character, with the exception of the British university system. It is this bureaucracy that has prompted that the search for efficiency of higher education systems was not a priority objective for these institutions.

The existence of incompatibility between the educational systems and the absence of a good information system about the benefits of each of the institutions meant that mobility between countries was practically void, this was helped by the lack of an external accreditation process which conditioned the international recognition of European degrees.

We agree that diversity of European higher education systems is an important value that should be preserved. However, this diversity must be compatible with certain levels of comparability between the higher education systems to facilitate the convergence that we are experiencing in almost all other aspects of our social and economic systems.

It is important for agencies to establish basic standards and key performance indicators for accreditation that will function as benchmarks for measuring the performance of evaluated programs and institutions that allow their

comparison with each other, but unfortunately due to the cultural and geographical diversity existing in the European Union, the indicators of quality vary from country to country.

Our proposal is that the procedure for evaluating the quality of higher education institutions must consist of the following key features:

1. Autonomy and independence in procedures and methods of quality assessment, as much for the government as the higher education institutions.

2. Carry out a self-evaluation by the institutions that will be addressed by taking into account the national council accreditation handbooks. There will be a report of this self-evaluation where information about the organization and policies from the same, and information about each department and its curriculum should be included.

3. An external evaluation must be conducted (peer-review group) along with visits to the institution being evaluated. The findings of this visit are to be incorporated into a report for the relevant expert committee of the national accreditation organization where will review the data and the fulfillment of the criteria for accreditation.

4. The final evaluative result will be based on the results of the previous two reports (the self-evaluation and external evaluation by specialists) and will decide the granting or withdrawal of the accredited status of the institution or program. This report must be accessible to the public.

#### **5. Conclusion**

Accreditation has obtained an important weight in quality assurance of the European Higher Education Area. At present, most of the countries have their own accreditation model. But the way towards a system of quality guarantee in Europe has not finished, coordination and interaction of the accreditation agencies are needed to continue advancing. These organization have to advance in the definition of common indicators for the evaluation and accreditation.

To reach our goal of achieving a top quality higher education we need a European higher education area with strong, autonomous and effective higher education institutions, a keen sense of the importance of quality and standards, effective peer reviews, credible quality assurance agencies, an effective register and increased co-operation with other stakeholders, such as



employers and the participation of the students in evaluating the quality of their own universities are our proposals that will achieve our goal of achieving a high quality higher education.

On the other hand, the public organisms and the accreditation agencies will have to establish common standards and systems of indicators that will favour international recognition all over the world of the quality criteria.

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# Tension between Market and Non-Market Mechanisms in the Chinese PhD Training

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## Abstract

*The past two and half decades witnessed a significant growth in the Chinese PhD human capital acquisition. What factors and mechanisms stimulated such a growth? Very little literature documents this topic. This paper tries to rectify this deficiency by exploring market and non-market factors and mechanisms of the Chinese PhD human capital acquisition in the contexts of centrally planned, transitional and market economies. It concludes that the Chinese PhD human capital acquisition is a interaction process of market factors with policy release and institutional transition. In this process, domination of the government plan mechanism is gradually being transferred to market mechanisms through policy regulation. The supply-, demand- and institutional constraints co-exist in the Chinese PhD human capital production which has its own characteristics in its rationale and its output depends not only on its demands and inputs but on its transfer technology. The author suggests, to reduce the tension between market and non-market mechanisms, more market-oriented reforms should be made, more inputs should be invested, and more measures should be taken to update the transfer technology of PhD human capital, especially learning-doing technology and peer-collaboration effects.*

## 1. Introduction

China has witnessed an accelerated growth in its PhD human capital acquisition since 1982. The first doctoral degrees after reforming and opening-up were awarded to only 13 people in 1982; however, the number of doctorates awarded in 2007 dramatically increased to a total of 39,592, more than 3045 times growth within 25 years [1]. Why does the Chinese PhD human capital grow so fast? Or what are the factors and mechanisms that have stimulated such a robust growth? How do the market factors and mechanisms interact with non-market factors and mechanisms to influence the Chinese PhD human capital acquisition and thus form the tension between them? This paper tries to provide a tentative answer by analysing economic performances of individuals, universities as well as governments in the PhD human capital acquisition in China.

## 2. Features of the Chinese Higher Education market

The market for higher education has some distinctive features that differentiate this sector from others [2], [3].

First of all, most universities allocate places to students by administrative rationing, using selective exams to determine university admission. Then, the performance or quality of universities depends positively on the ability or human capital of their students, which makes higher education provision a case of customer-input technology, as described by Rothschild and White [4]. Furthermore, many higher education institutions are non-profit maximizers and their objectives are sometimes difficult to determine. As James [5] suggests, if colleges and universities have a single-valued objective function, it is akin to "prestige maximization". Lastly, higher education in and of itself is a kind of quasi-public goods or price-excludable public goods, which partially shares properties and features of both public goods and private goods [6]. Therefore the production of higher education products is determined by market factors in addition to being adjusted and partially financed by governments. It is exactly on this feature of higher education that my analysis of factors affecting doctoral human capital production develops in two facets: market factors and non-market factors.

Besides sharing the common features above, the Chinese higher education market has the following extra characteristics distinguished from that of Western countries:

Firstly, China's private universities did not have PhD programs even though private higher education in China developed quickly. Therefore PhD human capital production only goes in public universities. Secondly, competition for resources of PhD human capital production only takes place among public universities. Thirdly, with regard to education budget, although multiple fund channels have been opened up, governmental finance allocation is still the major source, especially for education of graduates including masters and PhDs. Colleges or universities directly controlled by the central government are mainly funded by the central financial pool. Colleges or universities controlled by local governments are supported by local

finance. Moreover, the Chinese higher education market is a typical supply-side constrained market, that is, currently China cannot supply adequate high-quality higher education to meet the needs of PhD applicants because of its insufficient education resources or inputs [7]. Lastly, Chinese PhD education has three typical characteristics: a) The length of study for a doctoral degree varies from 3 to 5 years. Generally it is 3 years while for those in-the-service it is usually about 4 years unless a PhD student suspends his schooling temporarily or abandons his study. b) Currently there are two kinds of enrollments for PhD candidates: state-planned PhD students and non-state-planned PhD students. The tuition fee of the former comes from central government and the university in which they are studying, while that of the latter is sponsored by the institutions for which doctoral students are serving or will serve after graduation. It could also be paid by the doctoral students themselves. c) There is no loan market for PhD students.

### 3. Chinese PhD Human Capital Acquisition: Market Factors

Market factors are composed of those of supply and those of demand to influence or be involved in the the Chinese PhD human capital production.

I divided the demand for PhD human capital into two categories: individual demand and market demand. There are two kinds of individual demands: a master-degree holder's demand for PhD human capital and an employer's demand for PhD human capital. A master-degree holder's demand for PhD human capital (**D<sub>ih</sub>**) is influenced or determined by the following factors: employment rate (**Re**), the price of master human capital or wage rate of master-degree holders (**P<sub>m</sub>**), the price of PhD human capital (**P<sub>d</sub>**), acceptance rate (**Ra**), a master-degree holder's preferences (**P**) and family background (**F**), as well as other unknown factors (**ε**). The total market demand (**D**) for PhD human capital depends on the quantity of all master-degree holders' demand for PhD human capital (**D<sub>m1</sub>**) and all employers' demand for PhD human capital (**D<sub>m2</sub>**). Supposing there are **m** master-degree holders for their doctoral degrees each year, then in **t** years,

$$D_{m1} = \sum_{t=1}^T m_t \quad (1)$$

Supposing there are **j** employers and the 1st, 2nd..., and **j**th individual employers who want to employ **K<sub>1(1)</sub>**, **K<sub>2(1)</sub>** ... **K<sub>j(1)</sub>** doctor-degree holders respectively in the first year, **K<sub>1(2)</sub>**, **K<sub>2(2)</sub>** ... **K<sub>j(2)</sub>** respectively in the second year, ..., and **K<sub>1(t)</sub>**, **K<sub>2(t)</sub>** ... **K<sub>j(t)</sub>** respectively in the **t**th year, thus the total market demand in **t** years will be as follows

$$D_{m2} = \sum_{t=1}^T \sum_{i=1}^j K_{it} \quad (2)$$

So the aggregate market demand for doctoral degrees (PhD human capital) (**D**) will be the sum of total **D<sub>m1</sub>** and total **D<sub>m2</sub>** minus their sharing part **D'**

$$D = (D_{m1} + D_{m2}) - D' \quad (3)$$

Supply or inputs in the PhD human capital can also be divided into two categories: individual supplies and market supplies. There are four kinds of individual supplies. The first one is the inputs by PHD students (**P<sub>1</sub>**) which are composed of PHD students' labour (**L<sub>d</sub>**), and capital (**C<sub>d</sub>**) (physical capital (**P<sub>c</sub>**) and initial human capital stock (**H<sub>di</sub>**)). The second supply is the inputs by a university (**P<sub>2</sub>**), which are composed of labour input (**L<sub>u</sub>**), and capital inputs (**C<sub>u</sub>**) (the university's human capital (**H<sub>u</sub>**) and physical capital (**P<sub>u</sub>**)). The third supply is the social inputs or social capital in a PhD's human capital production (**P<sub>3</sub>**). The fourth supply, which I hold, is **Human Capital Transfer Technology (T)**, which entails the integration of teaching-administrative technology (**T<sub>1</sub>**), learning-doing technology (**T<sub>2</sub>**) and peer-collaboration effects (**T<sub>3</sub>**) (**T = T<sub>1</sub> × T<sub>2</sub> × T<sub>3</sub>**).

Market supply of PhD human capital depends on all those factors which in turn influence the supply of individual universities. Besides the inputs used to produce PhD human capital and the available technology, the supply of PhD human capital in a market also depends on the number of sellers, namely, the number of PhD holders (**Q<sub>d</sub>**) and universities (**Q<sub>u</sub>**).

$$S_m = f(P_1, P_2, P_3; Q_d, Q_u; T) \quad (4)$$

Supposing the quality of PhD human capital is given, the quantity of PhD human capital a university produces annually will depend on the number of its doctoral degrees conferred in that year. Supposing there are **n** employers and the 1st, 2nd..., and **n**th universities which confer **q<sub>1(1)</sub>**, **q<sub>2(1)</sub>** ... **q<sub>n(1)</sub>** doctor degrees respectively in the first year, **q<sub>1(2)</sub>**, **q<sub>2(2)</sub>** ... **q<sub>n(2)</sub>** respectively in the second year, ..., and **q<sub>1(t)</sub>**, **q<sub>2(t)</sub>** ... **q<sub>n(t)</sub>** respectively in the **t**th year, thus the aggregate PhD human capital supply in China **S<sub>m</sub>** in **t** years will be as follows

$$S_m = \sum_{t=1}^T \sum_{i=1}^n q_{it} \quad (5)$$

### 4. Chinese PhD Human Capital Acquisition: Non-Market Factors, Operation Frameworks and Mechanisms

As a product of higher education market, Chinese PhD human capital is produced in the background of the Chinese institutional transition, located within the process of the reform of a higher education system.

#### **4.1. Chinese PhD Human Capital Acquisition: Institutional Context**

Since the late 1970s, China has started to implement new state policies of economic reform by opening up to the outside world, aiming at accelerating its economic development. This has initiated the process of transition from a centrally planned economy to a market economy. This process has a strong impact on the Chinese universities. With the labour market gradually established in China, the development and allocation of human capital mainly goes by market mechanisms other than the governmental plan. In such a background, higher education institutions need to gear their programs to meet the needs of the labour market. And also, the economic reforms coincide with the information revolution which led the world into a new era of a knowledge-based economy. The ability to generate, accumulate, deploy, and utilize knowledge information has become crucial for development. Furthermore, information economy has formed an irresistible and irreversible trend of internationalization of higher education. Thus, the necessity of reforming Chinese higher education system, which used to be a part of the centrally planned economy, should be put on the agenda.

#### **4.2. Operation Framework and Mechanisms of Chinese PhD Human Capital Acquisition in the Context of the Centrally Planned Economy**

The Chinese higher education in the 1980s and 1990s maintained almost the same framework and operation mechanisms as those in the context of the centrally planned economy. In such an operation framework, the state policies dominated almost all aspects of PhD human capital production and distribution while the market mechanism lost almost all its effects in adjusting PhD human capital production and allocation. The only place in which there was somewhat the shadow of market mechanism was the competition among examinees in the PhD entrance examination. Although the competition existed, however, it was limited and very weak, especially in the initial stage of PhD education. In the three successive years of 1981 to 1983, PhD enrollment did not even reach the numbers planned because the resources of entrants were insufficient. So the state plan was the only mechanism in such an operation framework.

#### **4.3. Operation Framework and Mechanisms of Chinese PhD Human Capital Acquisition in the Context of the Market Economy**

In the market economy, the interaction of labour market demand and supply is fundamental to PhD

human capital model. It influences the wage rate of PhD graduates and expected benefits from PhD education as well as the demand for PhD human capital. This results in the outputs of PhD human capital from universities to labour market. The performance and competitiveness of PhD human capital in the labour market serves as a feedback to a university's PhD human capital production. However, the market is not an omnipotent and a panacea. Market failure often happens in both the higher education market and the labour market. It is clear then that the government should still play a very important role in this market context. The Chinese government exerts its impacts on PhD human capital production mainly through policy tool, including a) macro-economic policies of influencing the total demand and labour market demand for PhD human capital; b) educational and funding policies, such as the policy of expanding PhD enrollment, and the policy of financing the programs of national priorities; c) a quality control system for PhD education such as evaluating PhD disciplines and ranking PhD programs every three years.

In such a framework, the allocation mechanisms are comprised of two aspects: market mechanisms and the mechanism of government policies, which is illustrated as follows:

**Prices.** The mechanism of price works as follows: to pre-PhD students, the price of master's human capital or wage rate of master-degree holders in the labour market ( $P_m$ ) and the price of PhD human capital ( $P_d$ ) are two determinants in whether an individual master-degree holder will be enrolled in a PhD program or not. To an in-school PhD student, if the price of his inputs ( $P_1$ ) is too high for him, he will probably choose to drop out from school. To a PhD graduate, if the price of PhD human capital or wage rate of PhD graduates in the labour market is much low beyond his expectation, he will probably give up on entering the job market. As such he may choose, for example, to go abroad. To a university, if its budget for PhD human capital production is given, the price of its inputs in PhD human capital production will influence the number of PhD students it can enroll. That is to say, given the constraint of school budget, if the price of university inputs increases or decreases, taking the quality and other factors as given, the enrollment rate will decrease or increase. Taking number of enrollment and other factors as given, the quality of PhD human capital will decline or increase.

**Exams.** Akin to Romero and Del Rey [3], I also hold the belief that exams are a mechanism for Chinese universities to select the best students among those who are willing to attend a PhD program in a university. Universities set up a minimum score to accept those whose scores are equal to or higher than the minimum score. Supposing that exam technology is able to perfectly

reveal a student's ability, which means there is an one-to-one relationship between the standard of admission and the ability of the least number of students accepted into the university PhD programs. Thus, students who obtain a score higher than the minimum established by the university will add more human capital to the whole initial PhD human capital stock of a university. Assuming the admission standard (the minimum admission score) is uniform across universities, a university with more entrants whose scores are much higher than minimum score will have more initial doctoral human capital.

**Competition.** Competition also plays a role in allocating resources for PhD human capital production. Competitions take place in the following areas: firstly there is a competition among examinees in the PhD entrance examination, through which universities will select students for their doctoral programs according to their admission standards. Secondly, this competition also carries through universities with the same or similar doctoral programs. They not only compete for resources of talented or qualified pre-PhD students and excellent faculties, especially prominent professors, but also for the government funding as well as the rank of their doctoral programs. Moreover, competition mechanism also works among PhD students, their supervisors and other teachers who are involved in PhD human capital production.

**Policies.** Policy mechanism can complement the deficiencies and failure of market mechanism by adjusting the university performances, the behaviours of families, pre-PhD students, PhD students or employers so as to influence the supply of or demand for PhD human capital.

**Other Mechanisms.** The Chinese PhD human capital acquisition is a systematical activity, which not only involves universities, students, families and governments but also is related to the whole society in a broad sense. This not only includes competition but also has collaborations and peer effects. The mechanisms listed above are evidently the main ones.

#### 4.4. Current Operation Framework and Mechanisms of Chinese PhD Human Capital Acquisition in the Context of Transitional Economy

The current operation framework and mechanisms of the Chinese PhD human capital acquisition, in comparison with those in the context of market economy, besides sharing their common mechanisms, have the following different features:

Plans still exist as a mechanism of resources allocation. Although China had declared in 2003 that the market economy system has already been shaped fundamentally, in terms of the higher education dimension, however, the shadow of planned economy still exists in the following three aspects:

(1) Plan for PhD enrollment quotas. As a part of educational plan, the PhD enrollment quotas are yearly distributed to universities by the Education Ministry of China, which means that universities themselves have no priority to decide the number of PhD enrollments according to their resources.

(2) Plan for PhD programs and disciplines. Each newly planned PhD program and discipline from universities must be evaluated and approved by the Education Ministry of China.

(3) Double tracks in tuition fees. This is another distinguished feature in the current framework of PhD human capital acquisition different from that of regular market economy context.

The above features will result in the following problems to the Chinese PhD human capital acquisition: The government plan for the PhD enrollment quotas would restrain the effective market demand for PhD human capital from pre-PhD students if it could not reflect such a demand. That is to say, besides supply-constraint and demand constraint, the government plan is also a constraint added to the Chinese PhD human capital acquisition.

The government plan for PhD programs and disciplines will bring universities into fierce competition for new PhD programs and disciplines. On the one hand, the universities will tend to forget the fact that the demand and criteria of PhD human capital which are determined by the labour market other than being set by governments. On the other hand, such a competition is more likely to result in rent seeking and corruption.

### 5. Conclusion and Policy Implication

The purpose of this study was to explore the tension between market and non-market mechanisms by analysis of the market and non-market factors which stimulate the significant growth of the Chinese PhD human capital acquisition. From the analysis above, I have drawn the following conclusions:

(1) The Chinese PhD human capital acquisition is an interaction process of market factors with institutional transition and policy release. This process is composed of four periods: the pre-period, the period in the context of centrally planned economy, the period in the context of transitional economy and the period in the context of market economy. This process can be clearly seen from the following equations of production function of PhD human capital:

$$Y=f(X)=f(X_m, X_{non-m})=f(D_m, S_m; I, P, \beta) \quad (6)$$

Where  $X$  denoting the aggregate factors determining or stimulating the Chinese PhD human capital acquisition, which consists of the market factors  $X_m$ , and the non-market factors  $X_{non-m}$ , is the variable of the aggregate output of the Chinese PhD human capital  $Y$ .  $X_m$  is the sum of all market

factors that influence total market demand  $D_m$  and total market supply  $S_m$ .  $X_{non-m}$  is the sum of all non-market factors including institutional transition  $I$ , government policy  $P$ , and other non-market factors  $\beta$ . This equation expresses that the aggregate output of PhD human capital is the function of variables of market demand, market supply, institutional transition, government policy and other non-market variables.

(2) Following the institutional transition and policy release, domination of the government plan mechanism in the PhD training is gradually being transferred to the domination of regular and mature market mechanisms regulated by the government policies. In the context of centrally planned economy, plan is the dominant mechanism in the Chinese PhD human capital acquisition. In the context of transitional economy, more and more market mechanisms were generated and market became the major force while plan fell to be a minor mechanism in the PhD human capital production. In the context of market economy, market mechanisms and the mechanism of government policies jointly work together in the Chinese PhD human capital production.

(3) The supply-constraint, demand-constraint and institutional constraint co-exist in the Chinese PhD human capital acquisition. The supply constraint mainly results from the insufficient inputs by governments and universities, and also from the lack of rich private and social inputs. Demand constraint mainly comes from pre-PhD students' (master-degree holders') and in-school PhD students' financial difficulty when they attempt to acquire or do acquire their PhD human capital. Even though there is no tuition fee for nationally planned PhD students, such a case still exists and thus constrains the Chinese PhD human capital acquisition. There is also a constraint from the current Chinese education system, which means that the existing shadow of centrally planned economy in PhD education provision is a constraint for mechanisms of market supply and demand to play an effective and efficient role in the Chinese PhD human capital production.

(4) PhD human capital has its own characteristics in its production rationale and production factors, which are different from those of other goods and services, and also from those of purely private goods and purely public products. These characteristics are: a) The relationship between PhD students and their university in doctoral human capital production is costumers-producer (producers-customer), co-producers, and double sellers. b) The teaching-administrative technology, learning-doing technology and peer-collaboration effects constitute the human capital transfer technology in PhD human capital production. c) Two heterogeneous demands for PhD human capital, one of which is from pre-PhD students before doctoral human capital

production begins and the other is from employers after PhD human capital production concludes, are different from one homogeneous demand for other goods and services. d) The most obvious characteristic in PhD human capital production is its customers' (PhD students) inputs. e) As a quasi-product, PhD human capital shares some common aspects with the public products and private goods.

(5) The output of PhD human capital including its quantity and quality depends not only upon its demands and inputs but also on the transfer technology of human capital.

The above conclusions have the following policy implications:

(1) In order to lessen the institutional-constraint in the Chinese PhD human capital production, the Chinese government should make more market-oriented reforms in the Chinese higher education sector, especially in its PhD training, to build a fair and competitive higher education market symmetrical to the Chinese labour market.

(2) In order to reduce the supply-constraint and demand-constraint, more inputs should be invested into the Chinese PhD human capital production. These inputs can be funded with more expenditures from governments and universities, more co-investments by universities and businesses, or more donations from other social sources.

(3) Universities with PhD programs should not only improve their teaching-administrative technology, but also update and increase their PhD candidates' learning-doing technology and peer-collaboration effects so as to improve the quality of PhD human capital to better meet the employers' demands in labour market.

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# A Comparative Study on the Factors Affecting the Writing Performance among Bachelor Students

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## Abstract

*This comparative study investigates the writing performance of undergraduates and the problems that hinder students' perception of good writing skills. There are many factors affecting undergraduates writing performance in ESL, like content, vocabulary, organization, language use and mechanics in writing. The most significant component in writing that hinders their writing proficiency is language use as they have to learn the grammar, syntactic structure, vocabulary, rhetorical structure and idioms of a new language (ESL). Writing is a difficult task for them and the acquisition of grammar and other language structures makes it more difficult and complicated. We believe that students who do not read and write well in their first language need to work harder on the new creative activity of forming ideas and thoughts in English for the readers to understand. We recommend that writing lecturers provide ample time and opportunities for them to write and form ideas clearly. Finally, lecturers should focus on helping students to become aware of how and why they write, and encourage them to write freely, fluently and well.*

## 1. Introduction

Writing is one of the most difficult skills for students to acquire. Writing is unlike spoken language, as it requires the readers or the audience to understand and interpret what has been written. Langan and Gunning agreed that writing is difficult when they stated that writing is both more complex and more abstract than talk [8], [4]. Moreover, Parker supported this view when he stated that writing could be a torment to students [10]. In addition, Pearsall and Cunningham and Emmons advocated that writing is definitely "hard work" [2], [11]. Therefore, it is evidently true that writing poses a number of problems to the students, as it is a skill that is difficult to master. It is believed that writing demands a great deal of skills and conventions such

as writing readiness and grammatical rules for the students to become proficient and effective writers. Besides that, teachers too face great challenge to teach these skills and conventions as students may at times find them confusing and difficult to understand and write affective writing in English. Writing therefore is not just putting pen to paper or writing down ideas but it is how these ideas are presented or expressed effectively. This highly demanding process of writing requires a number of skills and conventions like organization in the development of ideas and information; a high degree of accuracy in choosing the right words so that there is no ambiguity of meaning and also the right use of complex grammatical devices to focus and emphasize ideas. Besides, writing demands the writer to have careful choice of vocabulary and understand grammatical patterns and to be able to write sentence structures that is appropriate to the subject matter. Therefore, besides having knowledge in skills and conventions of writing, ESL students have to practise a lot of writing. However, there are other factors that may affect their writing performances. Currently in Malaysia, few researches have been carried out pertaining to writing performance of students. It is evidently true when Freedman, Pringle and Yalden [3] agreed that, "...writing, and until recent years has been the neglected child in the family of the 'four skills': listening, speaking, reading and writing..." Therefore, with this in view, this study is conducted to examine some of the factors affecting students writing performance as writing in ESL poses great difficulties to them. Therefore, the objectives of this study are to determine the writing performance of degree students with matriculation and diploma qualification and examine the problematic areas in writing i.e. content, organization vocabulary, language use and mechanics that can help lecturers focus more during writing lessons and to examine the factors, which influence the writing performance of the two groups of students in Universiti Teknologi MARA, Terengganu (UiTM Terengganu).



## 2. Literature Review

Writing is one of the ways in which we explore our understanding of the world and discover the meaning of our experience. The Ministry of Education of New Zealand stated that writing is the act of using the language to discover meaning in experience and communicate it [9]. Similarly, Hall advocated that a good writer uses words to discover and to bring that discovery to other people [5]. Basically these similar views on writing relate to experience and discovery of meaning. However, teachers and learners should know some of the criteria to write good essays and become more proficient writers. Therefore, the citations and findings below provide some of the criteria for good writing performance. Firstly, Hall states that a good essay should be in the first place interesting to read [5]. Furthermore, the reading can be informative, descriptive and reflective which can make the reader understand clearly. If, for instance an explanation of an idea is provided, the writing should proceed logically as it moves from one point to the next. The writing or essay should form a cohesive whole. Whenever a terminology is used, definitions or explanations should be given. Appropriate examples or illustrations enhance the reading of a good essay. Furthermore, Hall states that a good essay is exhibited through its content: an understanding of events theories, actions, findings and views. For example strong persuasive writing is achieved by the writer's ability to organize and articulate ideas or events very vividly. Besides, that he explains that the other very important criterion of a good essay is structure. This means that a good essay is clearly structured, with a beginning, middle and an end, or normally termed as introduction, body and conclusion. Other than that, he states that the next criterion, for a good essay is presentation, which means that the essay is clearly laid out, articulately and grammatically written with original ideas. Most importantly, a good essay also brings 'discovery' to the reader. A good writer writes to provide pleasure that carries knowledge with it. The pleasure-carrying knowledge comes from self-understanding, and creates understanding in the minds of reader(s). This definitely makes it a good essay. Then, some may agree that a good essay is also a piece of prose or writing that can make contact with the reader (audience). This means that a good essay avoids clichés. Clichés are little cinder blocks of crushed and reprocessed experienced which when writers use them in writing, they violate the agreement to construct sentences in order to reach someone [5]. Therefore clichés prevent true contact by making false contact in its place. In other words a good essay

is able to make contact with the reader or audience without using clichés. According to Langan, a good piece of writing must also has a strong central idea (thesis) that is related to the topic discussed. In other words, the essay has a clear, logical organization with well-developed major points that are supported with concrete and specific evidence. Besides that, there are effective transitions between ideas. Moreover, the use of appropriate words in the essay exhibits an admirable style with sentences that are sophisticated. Meanwhile, Jacobs et al. suggested a few criteria for excellent writing, which are represented on the ESL Composition profile at the "Excellent to Very Good" mastery level [7]. The first criterion is "content" which has the descriptors as knowledgeable, substantive, thorough development of thesis and relevant to the assigned topic. The descriptor "knowledgeable" includes understanding of the subject and the facts or information used by the writer. While "substantive" means that several points are discussed and there are sufficient details. There is also originality with the concrete details to illustrate, define, compare and contrast factual information supporting the thesis. "Thorough development of thesis" is described as the thesis is expanded sufficiently to convey a sense of completeness and there is a specific method of development like comparison and contrast, illustration, definition, description, example and fact. The writer is also aware of different points of view. The last descriptor "relevant to assigned topic" is described, as all information is clearly pertinent to the topic discussed. Furthermore, Jacobs et al. emphasized that, the general procedures for determining good criteria in writing performance are firstly, take two or three minutes to evaluate and read the essay twice. Then, form an overall impression of whether the writer has delivered a clear and complete message. This means that the writer's ideas are readily apparent, appropriately sequenced to fulfill our expectations and adequately developed to convey a complete message. Later, we are able to identify the descriptors in the "content and organization" components or criteria, which most accurately describe the writer's overall effect and assign a score. Then, the next step is to reread the essay to verify the first impression and see whether the communicative effort of the writer is effective or not and the mastery of vocabulary, grammar and mechanics help or impede our comprehension of the message in the essay. Meanwhile, Hedge stated that effective writing requires a number of things: a high degree of organization in the development of ideas and information; a high degree of accuracy so that there is no ambiguity of meaning; the use of complex grammatical devices for focus and emphasis and a

careful choice of vocabulary [6]. She further advocated that grammatical patterns and sentence structures to create a style, which is appropriate to the topic, are also important for effective writing. Therefore, Jacobs et al. and Hedge agreed with almost the same criteria for good effective writing that includes organization and development of ideas and information or content to convey a complete message. In conclusion, we believe that good performance in writing requires several skills such as getting the grammar right, having a wide range of vocabulary, demonstrating a mastery of conventions in mechanics of writing, and being able to construct effective and complex sentences. Last but not least, good and effective writing performance requires the writer to be knowledgeable about the topic assigned to him or her to write.

### 3. Analysis of Findings

The first part discusses the demographic factors that consist of two sub-topics, which are gender and qualifications. Both respondents were 40 students from Bachelor in Business Administration (Finance) and Bachelor in Office Management. The respondents were given BEL 411 final examination question paper in Section B to write descriptive essays. Then, two raters marked the essays based on ESL Composition Profile developed by Jacobs et al. The Profile contains five criteria (components), which are Content (30 marks) Organization (20 marks), Vocabulary (20marks), Language Use (25 marks) and Mechanics (5marks). Generally both the female and male respondents scored highest in Mechanics based on the ESL Composition Profile developed by Jacobs et al. The female respondents scored 70% while the male respondents scored 67.1% in Mechanics. The next highest score is Organization whereby the female respondents scored 65.7% and the male respondents scored 62.9%. This is then followed by Content, where the female respondents scored 63.4% and the male respondents scored 61.4%. The female respondents scored 62.8% in Vocabulary and the male respondents scored 59.6%. There was a drastic drop in Language Use where the female respondents scored 54.8% and the male respondents scored at 50.0%. Overall, it shows that the female respondents scored higher than male respondents for all the five criteria. The highest score for both the female and male respondents is in Mechanics while the lowest score for both of them is in Language Use. Overall, the female respondents scored higher than the male respondents for four criteria like Mechanics, Organization, Content and Vocabulary. However, both the female and male students had almost the same score for Content.

Generally, the female respondents scored higher than the male respondents for all the criteria. On the other hand, the respondents who had 1A - 2A (distinction/excellent marks) in SPM English grade scored highest (62.5%) in Organization but lowest in Language Use (46.0%). Meanwhile respondents who had 3B - 4B (good) in SPM English grade scored highest (70%) in Mechanics and lowest in Language use (54.9%). However, respondents who had a grade range of 5C - 6C (credits) in SPM English scored highest in Organization (64.2%) and lowest in Language Use (52.3%). Next, those who passed with 7 - 8 (pass) in SPM English grade scored highest in Mechanics (70%) and lowest in Language use (scored 48%). Meanwhile, all the respondents with the qualification of 1A - 2A, 3B - 4B, 5C- 6C and 7 - 8 in the SPM English Language Paper scored almost the same score for Organization. As a result, all respondents who had either good marks or average marks for their SPM English Language paper, scored lowest in Language Use. Generally, the female respondents scored higher in all the criteria of the ESL Composition Profile (Content, Organization, Vocabulary, Language Use and Mechanics). The highest component scored by the female respondents was in Mechanics whereby they scored 70%. However, the lowest component that the female respondents scored was for Language Use. Similarly, the male respondents scored highest for Mechanics (67.1%) while the lowest was for Language Use. Nevertheless, both the male and female respondents scored almost the same score for Content that was 63.4% and 61.4% respectively. Therefore, we believe that female respondents performed better in writing descriptive essays on the ESL Composition Profile developed by Jacobs et al. The female respondents' handwriting is not only neater than the male respondents but also they follow the conventions and rules of writing. Therefore, their essays are easier to read as they are tidier and do not impede communication. Next, the female respondents scored higher in all the five criteria of the ESL Composition Profile but there were very little differences between their scores. For instance, in Content, the difference of score between the female respondents and male respondents was only 2%. For both their highest scores in Mechanics, the difference of score was only 2.9%. Both male and female respondents scored highest in Mechanics and not in other criteria because, Mechanics is easier to master and acquire. In Malaysia, students start learning to write simple letters and words during pre-school until they reach upper secondary school level. Firstly, during pre-school education, children learn simple writing conventions like capitalization of alphabets and copying simple words. Then, when they are in the

primary school, they learn to write simple sentences following the rules and conventions in writing. Later, when they are in the secondary school, they have already acquired and mastered the Mechanics or conventions in writing. Therefore, we can conclude that, Mechanics is one of the easiest criteria that students can acquire in the writing skill and this provides the answer for the highest score. The next criterion was the qualification of both the female and male respondents in their SPM English Language paper. When the Diploma and Matriculation students first enrolled for their programmes, they had obtained different grades for their SPM English Language paper. Their grades or qualification in SPM English Language paper ranged from 1A - 2B (distinctions) to lowest grade 7 - 8 (a pass). In between, they had grades likes 3B - 4B and 5C - 6C (credits) which indicated that they were good in English Language. Nevertheless, respondents who scored 1A - 2B (distinctions) grades scored highest in Organization and lowest in Language Use. Respondents with 3B - 4B grades (good) scored highest in Mechanics and lowest in Language Use. Respondents who scored 5C - 6C (credits) in SPM English got highest in Organization (64.2%) and lowest in Language Use (52.3%). However, respondents with a pass or lowest grade (7 - 8) scored highest in Mechanics and lowest in Language Use. Therefore, we believe that the respondents who had good grades and lowest grade were not very good in their Language Use. This indicates that Language Use that includes mastery of sentence construction, agreement, tenses, word order, articles, pronouns, nouns and prepositions are very difficult for students to acquire and master. Even though, their qualification in English Language paper is good, they are incapable of using Language appropriately and effectively in their writing performance. We can assume that mastering a language is not an easy task especially English Language that is a second language (L2) to the students. Moreover, the skills in writing, particularly writing in L2 is difficult because Raimes suggests that non-native students needed more than just creativity to form ideas in English [12]. These students needed teachers' great concerns of grammar and syntax. This means that students have to acquire the basic rules of grammar and know the correct syntactic structures to compose and write their essays proficiently. Therefore, we can conclude that, good grades or qualification in their SPM English Language Paper did not contribute and help both the Diploma and Matriculation respondents perform well in their writing. The next findings revealed that respondents from the Diploma (Entry qualification) scored higher than respondents from Matriculation (Entry qualification) in all the five criteria in the ESL

Composition Profile like Content, Organization, Language Use, Vocabulary and Mechanics. The highest score for both respondents from the Diploma and Matriculation was for Mechanics and the lowest score was for Language Use. However, the Diploma respondents (Entry qualification) scored higher than Matriculation respondents (Entry qualification) in their writing performance because they use English Language more frequently. The Diploma respondents used English Language in all their programmes or codes as a medium of instruction. Exposure to English Language enables the Diploma respondents to perform better in the writing performance than the Matriculation respondents. Furthermore, we believe that the Diploma respondents were given more time and opportunity to practise writing compared to the Matriculation respondents. Moreover, Rizal from the Matriculation Division, Ministry of Education of Malaysia reveals that not all the subjects or codes in Matriculation programme are taught in English Language [14]. Some subjects use Bahasa Malaysia as the medium of instruction. Therefore, this assumption is made because the Diploma respondents have better exposure in English Language and their proficiency level is better than the Matriculation respondents. Moreover, Hedge agrees that extensive reading and more exposure to the language can help improve students' writing performance. Furthermore, we agree with The Ministry of Education of New Zealand that a writer needs three things; experience, observation, and imagination. This evidently shows that students write best when they have the experience or knowledge about the topics they are familiar with. Moreover, the observation and exposure they have in the language enable them to compose and write proficiently and effectively.

### **3.1. Inter-Rater Correlation Reliability**

The results of the correlation analysis revealed that there was a positive correlation between Rater 1 and Rater 2 for the ESL Composition Profile for Content ( $r = 0.586$ ), Organization ( $r = 0.335$ ), Vocabulary ( $r = 0.440$ ), Language Use ( $r = 0.636$ ), Mechanics ( $r = 0.409$ ) and Writing Performance ( $r = 0.707$ ). All correlations were significant at 0.01 levels except Organization for both Raters at 0.05 levels. In conclusion, the ratings for both raters (1 and 2) were reliable.

### **3.2. Correlations between Writing Performance and Content, Organization, Vocabulary, Language Use and Mechanics**

The results showed that the Writing Performance is highly correlated with Content ( $r = 0.924$ ), Organization ( $r = 0.859$ ), Vocabulary ( $r = 0.884$ ), and

Language Use ( $r = 0.880$ ). There is no correlation between Writing Performance and Mechanics ( $r = 0.305$ ). The correlations are significant at 0.01 levels. As a conclusion, Writing Performance depended on Content, Organization, Vocabulary, and Language Use only.

### 3.3. Mean Difference Score for Each Criterion Between Diploma And Matriculation Entry

The results revealed that there were significant differences in Score for Content, Vocabulary and Language Use for the Diploma and Matriculation Entry. The mean differences score for the Diploma Entry, for Content with Mean = 19.0217, Vocabulary with Mean = 12.5652 and Language Use with Mean = 13.6957 and for the Diploma Entry the mean differences score for Content with Mean = 17.5882, Vocabulary with Mean = 11.6471 and Language Use with Mean = 12.2353.

There were no differences between both Diploma and Matriculation respondents for the two criteria, which included Organization and Mechanics. As a conclusion, the Diploma respondents scored significantly higher than Matriculation respondents for the three criteria, Content, Vocabulary, and Language Use.

In conclusion, both the Diploma and matriculation students scored highest in Mechanics and lowest in Language Use in the ESL Composition Profile for Average Rater 1 and Rater 2. The finding in this study showed that Writing Performance depended on Content, Organization, Vocabulary and Language Use. There was no correlation between Writing Performance and Mechanics. Therefore, we believe that, good writing performance definitely has very important criteria like Content, which means the writer has an understanding of events, actions, findings, and views that are vividly presented. Besides Content, Vocabulary and Language Use play important roles too for students to write proficiently and effectively. Students who are good language users are capable of commanding attention from the readers. They can enlighten and captivate more readers with their good command of language. Organization or structure is also an important criterion for students to have in their writing. A good essay is clearly structured with a beginning, middle and an end. Therefore, we can assume that all the four criteria like Content, Organization, Vocabulary and Language Use are important in the writing performance. However, Mechanics do not make a great difference on writing performance because it only includes capitalization and writing conventions so that the writing will look the way formal writing is expected to look. In conclusion, we believe that

writing is definitely a skill that needs to be taught and learnt, and students should be taught by lecturers to acquire and master the skills in writing so that they emerge as proficient and effective writers.

## 4. Contribution to Knowledge

Language may be our most powerful tool. We use it to understand people through listening, reading, speaking and writing. However, the ability to write well is not a naturally acquired skills, it can be learnt or transmitted as a set of practices. This is similar to what Reid and Langan advocate that writing is a craft and also a skill [8], [13]. It means that it can be taught and learnt. Therefore, writing skills must be practised and learned through experience. When a craft or skill is learnt, students can use it especially for many purposes. However, it takes time to become skilful and proficient writers. Writing teachers and lecturers should play vital roles in preparing students and providing them ample time and more opportunities to practise writing. Firstly, writing is a thinking process. It is a skill that is difficult to master. It undergoes a long and tedious process of drafting, revising and editing. Students and lecturers should seriously collaborate and cooperate to achieve some kind of satisfactory level of writing proficiency. This is vital for our prospective graduates to be able to write proficiently and effectively in English Language. Therefore, in this particular aspect Raimes suggests that writing lecturers should be concerned with process of writing rather than product. Furthermore, she states that when lecturers gave assignments to students, they should carefully choose these assignments to provide the chance for them to pay attention to the writing and revision process. This means giving them time to work on a paper, time to work with peers and also alone, time to deal with content, organization, and later the proof-reading stage. This is the thinking process that brings discovery to other people. In other words, we believe that students can master the writing skills if lecturers encourage them to write consistently. Moreover, Spandel states that successful teachers write and share in their writing processes and products with their students [15]. They personally experience what they require their students to do and as a result, they become more sensitive about the problems students face in their writing. Therefore, lecturers should themselves begin writing because writing is sharing and discovering new ideas and these are helpful and important for both parties. She further emphasizes "there are no set of standards that can 'transform education' if we (teachers) fail to cherish and challenge the human heart that is the source of good

teaching”. In other words, we believe that she wants teachers to listen thoroughly and motivate our students and also share our views and ideas with them and later becoming more sensitive and tolerant with them. Furthermore, Chaffee, McMahon and Stout advocate that students should be taught to think critically and creatively when they write [1]. They state that a thoughtful writer thinks critically while moving through the process of writing. They continue by saying that, “no collection of writing tips and strategies will ever enable you to write thoughtfully if you’re not thinking critically”. Therefore, we believe that lecturers should encourage and provide students opportunities to be adventurous with the language, to go beyond what they have learnt and to take risks with the effects of writing. This in turn enables our students to be involved with new language; the effort to express new ideas and the constant use of their hands and brain is a unique “process” to reinforce learning. The close relationship between writing and thinking makes writing an invaluable part of any language course. Therefore, we believe that lecturers should learn not to take themselves too seriously in writing because occasionally you can tell your students “it’s not a sin to throw the whole page of writing away if it just isn’t working (not right)”. Therefore, we believe that both lecturers and students will have deep satisfaction and understanding in sharing new ideas. Next, there is a widely held belief that to be a good writer, a student needs to read a lot. This is generally true, because students are able to acquire proficiency through reading. The Ministry Education of New Zealand states that reading and writing, like talking and listening are inseparable processes. This evidently points out reading and writing are closely linked because readers use their knowledge and experience to construct meaning from the books they read and writers however, construct meaning in the texts they write. Therefore, we believe, students and lecturers need to read extensively in order to create, construct ideas and organize thoughts to write proficiently and effectively. Furthermore, students who read a lot are able to use many kinds of language knowledge in constructing their ideas and thoughts and put them on paper. It is our greatest hope that lecturers should encourage students to read widely. Though it is not an easy task, nurturing and sustaining students’ interest in reading, lecturers should foremost play their roles as motivators efficiently. Using the newspapers, magazines and other reading materials as teaching aids for our lessons for instance can generate the reading habit among our students. As a result, students will become more proficient and effective writers if they read extensively.

## 5. Conclusion

This study concludes that extensive exposure to the English Language has enhanced the writing performance of the undergraduates from the Diploma programme. These students had more years of exposure in literacy skills compared to those from the Matriculation programme. Evidence shows that these undergraduates have mastered the writing skills and become proficient writers. This is in concord with Hedge’s argument that exposure and reading extensively are beneficial to acquiring effective writing skills. Writing maybe difficult and demanding but frequent exposure in reading and writing will help improve writing performance.

## 6. Future Work

Lecturers and teachers should focus on helping students become aware of how and why they write, and also encourage them to write freely, fluently and well. Next, students should be made aware that writing is an important tool for learning and communicating. Writing is a vital tool in learning for students because when they write they go through or experience the ‘thinking process’ or ‘writing process’ that involves three stages, such as pre-writing (brainstorming), writing and rewriting (revising) and finally editing (proof reading). Therefore, the importance of writing lies in the abilities of the students to develop language skills in terms of fluency, accuracy and appropriateness of meanings and messages. In conclusion, writing is an important tool for students not only in learning but also in communication. Consequently, writing is a major means of assessing learning throughout our education system. Most examinations and tests are assessed on the basis of written performance. Therefore, writing skill is very important for students to acquire and master because they are being assessed by the way they write. Nevertheless, the most important reason for students to acquire good writing skills is to use writing in their creative ways to interact effectively with people and the world around us. Therefore, lecturers and students should seriously collaborate and cooperate to achieve some kind of satisfactory level of writing proficiency that is expected of our students. We believe that lecturers should be aware of our students’ different needs and wants. As a result, lecturers need to review and reflect on our approach in teaching writing. We may also decide to register or enroll ourselves in a ‘refresher course’ or a professional development course to keep abreast and meet with the special needs and demands of our students nowadays. Last but not least this paper can

lead into future research and investigations on how to motivate university undergraduates to write proficiently and effectively in their academic fields and project work.

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## **Session 5: Cross-disciplinary Areas of Education**

Whole Language and Constructivism: An Analysis of Learner-Centredness  
(Irmhild Horn)

Factors Effecting on Achievement Motivation in Learning Fundamental Mathematics of Bangkok University's Students  
(Krisawan Prasertsith)

Learning Science through Physical Activity and Sport  
(Jody L. Riskowski)

Attitudes towards Marriage in Students of the University of Shiraz  
(Babak Shamshiri, Shahrzad Shah Sani, Fatemeh Bathaei)

# Whole Language and Constructivism: An Analysis of Learner-Centredness

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## Abstract

*Contemporary education theory underwrites learner-centredness. Learner-centred ideas are grounded in the premise that cognitive abilities develop spontaneously in accordance with a natural developmental trajectory and optimal education is education that is in harmony therewith. Whole language and constructivism as educational approaches issued forth from this premise. Learner-centredness is at present official policy in South Africa, but at the same time reasons are being sought for the poor academic performance of South African school learners, which is especially predominant among the historically disadvantaged learners. To address the problem of disappointing academic performance in South African education, and in other countries, this paper analyses learner-centredness, specifically as it manifests in whole language and the constructivist approach to teaching.*

## 1. Introduction

After the fall of apartheid, the new South African government's aim was that schools should offer the kind of education that leads to high academic achievement. To meet this aim, outcomes based education (OBE) was statutorily prescribed and introduced in 1998 and, concomitantly, learner-centredness. Learner-centred ideas are grounded in the premise that cognitive abilities develop spontaneously in accordance with a natural developmental trajectory and optimal education is education that is in harmony therewith.

The change to OBE and learner-centredness has not had the envisaged result. In fact, South Africa is experiencing increasingly poorer academic achievement. This has not gone unnoticed by South Africa's education authorities. In fact, the prescribed curriculum was revised in 2001. Learner-centredness

remained, but more guidance as to the subject content of each learning area was given. However, academic achievement, especially in historically disadvantaged schools, still did not improve. In fact, the business world and university lecturers are increasingly complaining that in general the academic skills of South African learners are not up to par. In 2009, the official reaction to the persistently poor academic performance was that the Minister of Basic Education, Ms Angie Motshekga, appointed a task team to review and rethink the prescribed curriculum. Thus, in South Africa, reasons are being sought for the persistently disappointing academic achievement, especially of historically disadvantaged learners, but increasingly also of other learners. Poor academic achievement of historically disadvantaged learners is of special concern since it is these learners that are in dire need of the social and economic upliftment that high academic achievement makes possible. Against this background, this paper addresses the question whether learner-centred approaches, specifically whole language and constructivism, form pieces of the puzzle about poor academic achievement. However, before addressing this question one will first consider the difference between learner-centredness and traditional education.

## 2. The difference between learner-centred and traditional education

Learner-centred education is a romantic style of education. Romanticism is the philosophical stance that presupposes the goodness of nature and natural processes. Not only does it presuppose natural goodness, it also assumes that human development, in all its facets, is a natural, automatic process, and this (assumed) natural process should direct education rather than the knowledge one wants the child to learn [1].



That the child's cognitive state, that is, what he/she knows and/or can do, is a condition necessary for the consideration of what knowledge should constitute the subject content proponents of traditional education also hold, and have always held. The two education theories – progressive, learner-centred and traditional, content-centred – differ in that they hold different views of how cognitive, intellectual powers develop. Progressivism, or developmentalism, holds that *all* cognitive, intellectual powers develop automatically in accordance with a natural developmental trajectory, and education that follows the child's own natural pace of development is the optimal possibility [2].

In contrast, traditional education theory holds that whilst primary cognitive abilities – speech, a basic number-sense and psychomotor skills – are biological processes that in normal children in normal circumstances follow a definite and universal sequence, secondary cognitive abilities – the three R's and all further intellectual learning – “do not develop unless they are taught [3].” The three R's are not biological processes but artificial constructs, and they must be explicitly taught, for how else can one explain illiterate cultures as well as illiteracy in a literate culture [4]? In the apartheid era, traditional education theory underlay teaching in white schools with excellent over-all academic achievement. At this stage, it is appropriate to consider how education proceeds via whole language and constructivism.

### 3. Whole language and constructivism

*Whole language* advocates natural learning to read in a literature-rich environment. Whole language is an example of a so-called developmentally appropriate practice, and part of the so-called *literacy emergent* approach that excludes systematic instruction in reading, writing and spelling.

*Constructivism* is a postmodern, typically idealist, doctrine that the mind is constitutive of the reality that it experiences. Within this philosophy, the meaning of subject matter cannot be handed down and explained to students. Instead, students must engage in hands-on activities and independent research in order to construct their own meaning of subject matter. As Hein claims: “Constructing meaning is learning; there is no other kind [5].” That the constructed meaning may be wrong is excluded

by the postmodern premise that truth cannot be known. (Radical constructivists deny the very existence of truth.) Meaning construction can be done individually (as expounded by Piaget - a leading exponent is the radical constructivist von Glasersfeld [6]) or collectively as a group (as expounded by Vygotsky - a leading exponent is Gergen [7].)

#### 3.1 Whole language and reading disability

Wilson maintains that the increase in learning disabilities is actually a “teaching disability”, that is, the problem lies not within children but in learner-centred teaching methods that attempt to stimulate natural learning of secondary cognitive abilities [8]. Speech is a primary cognitive ability. Oral language, specifically the mother-tongue, is a natural outgrowth of speech, and children learn it naturally, that is, via everyday social interactions. However, reading and writing are not natural outgrowths of speech, but artificial constructs built on oral language [9]. The critical component in learning to read is learning the relationship between print and speech, which in an alphabetic language is the phonetic code. Whole language is rooted in the belief that the phonetic code is best learnt by young children in the same natural way that they learnt to speak their mother-tongue. All that is purportedly necessary is access to plenty of good books with lovely pictures, and children can, and will, learn to read as easily as they learnt to talk. Geary maintains that this idea “is almost certainly wrong [10].” In practice, children are expected “to memorise whole words or to guess words (or whole sentences!) using context, syntax or picture clues with no phoneme-grapheme instruction and are expected to ‘discover’ the alphabet code for themselves ‘along the way’ [11].” In other words, children learn each word as a logograph, as in non-alphabetic languages such as Chinese and Japanese Kanji [12]. Some children do manage to figure out the alphabetic code, but many remain poor readers, condemned to being labelled with a “learning disability” [13].

The change to whole language caused reading scores to plummet even further than they had when phonics was replaced with the look-say, flash-card method [14]. Empirical studies conducted by Adams in 1990, Brown and Felton in 1990, Chall in 1967 and 1983, Engelmann in 1992, Foorman in 1994, Groff in 1994, Paulu in 1988, and Shears and Keogh in 1993 have all found phonics to be clearly superior

to look-say and whole language, especially with at-risk students [15]. Prof Diane McGuinness, a leading cognitive psychologist, points out that the empirical evidence from cross-cultural comparisons (by Wimmer in 1993, Goswami and Wimmer in 1994, Landerl, Wimmer and Frith in 1997, and Geva and Siegel [sa]) shows that dyslexia does not occur at the same rate in all populations, but is predominantly found among English learners, which suggests that the description of dyslexia as an inborn neurological disorder is wrong; the source of difficulty in reading and spelling is the spelling system and the way reading and spelling is currently taught in English-speaking countries [16]. (In South Africa, well-nigh all black children do their schooling in English.) As Carnine says: “Data strongly support the explicit teaching of phonemic awareness, the alphabetic principle, and phonics, which is often combined with extensive practice with phonic readers. These are the cornerstones of successful beginning reading for young children, particularly at-risk youngsters [17]” The superiority of phonetic instruction accompanied with much practice and drilling is ascribable to the fact that it promotes rapid, automatic, unconscious, effortless decoding of individual words, which means that the reader’s conscious attention can be fully directed to the meaning of the passage. In a study conducted by Honig involving more than ten thousand teachers, all the teachers stated that reading-disabled children in the upper primary grades exhibit poor phonic decoding skills as well as other problems such as poor spelling, vocabulary, understanding, motivation and confidence, all of which stemmed from their reading failure [18].

The increase in reading problems has led to a so-called balanced approach which is whole language with an admixture of some phonics. The balanced approach to teaching reading is an implicit concession to the practical failure of whole language. In the balanced approach phonics is taught indirectly, the teacher points out letter-sound correspondences in the context of reading a passage. But empirical research of classroom practices has shown that indirect methods of phonics are not as effective as explicitly teaching letter-sound correspondences in sequence from linguistically easy to linguistically difficult. A 1997 study of Foorman and others “showed that about twice as many students learnt to read under systemic [phonic] instruction compared with the indirect strategy [19].”

### 3.2 Constructivism and academic disability

The current theoretical guide for teaching is constructivism. Constructivists assume that given an appropriate subject environment students will be motivated and able to construct for themselves subject knowledge, and such self-discovery promotes optimal understanding [20]. The focus in constructivism is on conceptual understanding. Direct teaching and extensive practice and drilling (labelled “drill and kill”) of algorithms and standard procedures, for example mathematical procedures, is deemed unnecessary and potentially detrimental to children’s development [21].

The constructivist teaching approach has two empirical problems. The first is that it does not recognise that the 3R’s are secondary cognitive domains. Like speech, basic numerical activities are primary abilities, the acquirement of which is facilitated through everyday, natural activities, but more complex mathematical skills are biologically secondary, and “there is no natural way to learn non-natural, secondary processes [22].” For optimal learning, they must be (artificially) taught and they must be drilled and practised to secure the learning. Natural learning of mathematical skills would require that all children be able to, first, construct correct conceptual meaning for themselves and, second, develop and use mathematical procedures. Geary maintains that it is not likely that all children will construct the correct meaning for themselves, and even if the correct meaning is constructed, “most children are not likely to be able to develop mathematical [and other subject-related] procedures solely on the basis of their conceptual knowledge [23].”

The second problem with the constructivist teaching approach is the denigration of the importance of drilling basic subject specific facts and procedures. The “argument that drill and practice and the development of basic cognitive skills, such as fact retrieval, are unnecessary and unwanted in mathematics education [and other subjects] fails to appreciate the importance of basic skills for mathematics [and other academic] development [24].” Of course, children need to understand mathematical concepts, and concepts related to other subjects, but they also need automaticity in basic knowledge and skills. Automaticity in basic knowledge and skills means that no or very little conscious effort is needed to use them, and automaticity and thus “real competency

only comes from extensive practice [25].” In constructivism, direct teaching and extensive practice and drilling is said to be detrimental and the latter is branded as rote/parrot learning.

Automaticity in basic knowledge and skills is *always* necessary - in sport, playing a musical instrument, phonetic decoding and mathematics; in fact, it is necessary in all learning areas and in every profession. The reason is that one can then concentrate on understanding the task and/or problem at hand. Furthermore, in mathematics, and all other learning areas, a lot of drill and practice is needed even for persons with much innate ability.

In contemporary education memorisation is degraded. The charge runs that it stifles all originality. Instead of memorising facts, it is said, true, meaningful learning depends on understanding – which is, of course, true. True, meaningful learning does depend on understanding. *Understanding is, however, only the beginning of learning.* Understanding something does not mean that one has learnt it, that is, that one knows it and has confidence in applying it. When one understands something one has taken the first step in learning; the next step is to commit it to memory, that is, to memorise it. Then, *and only then, when something has been committed to memory has one learnt it.*

Ready knowledge, that is, memorised knowledge, is important – in later schooling and in many professions. Most, if not all, professions require their practitioners to have a mass of detailed information stored in their memory. Medical doctors, engineers and many others cannot constantly consult books or the internet on the job. People who have had an education opposed to memorisation have great trouble in committing to memory the knowledge which is basic to and essential for their chosen professions [26].

Furthermore, higher order thinking skills, such as independent, critical thinking and problem-solving, are *always* conjoined to relevant, domain-specific information, and therefore such skills cannot be gained and subsequently exercised without having committed the associated information to memory. The denigration of memorisation is in fact a denigration of knowledge, and ultimately a defeat of the educational ideal of stimulating problem-solving and independent, critical thinking. As Hirsch points out: “Independent-mindedness is always predicated on relevant knowledge: one cannot think critically unless one has a lot of knowledge of the issue at hand. Critical thinking is not merely giving one’s

opinion [27].” In fact, common sense tells one that the person who can think critically and who can solve problems is, *without exception*, one who has sufficient knowledge of the relevant issue or problem.

The validity of the hypothesis of the superiority of learner-centred teaching was put to scientific test in the largest educational experiment ever undertaken, namely, America’s Project Follow-Through that began in 1967 and received its last state grant in 1995. It affected more than 70 000 children a year in more than 180 schools. Its goal was to identify the best teaching methods, specifically to teach economically disadvantaged students and thus uplift such communities. Nine teaching methods were tested, and each of these fell into one of three types – wholly learner-centred; highly structured, teacher-directed; and combinations. Students’ achievement in three areas, namely, academic performance, cognitive skills and self-esteem, at each Follow-Through school was compared with the other Follow-Through schools and also with non-Follow-Through schools. Two agencies independent from American education authorities and institutions analysed the data. The findings were unequivocal: *in all three areas, students taught by highly structured, teacher-directed methods came out on top and the wholly learner-centred at the bottom* [28].

#### 4. Conclusion

The popularity of learner-centredness can be ascribed to the appeal that it makes to educators’ love for children. Educators love all children, but in South Africa the concern is especially for the historically disadvantaged learners whose academic achievement has not improved with learner-centred approaches. From rigorous empirical research such as that of Project Follow-Through, it may be that for the academic, and ultimately the social and economic, upliftment of these learners the best teaching approach is not learner-centred methods but well-structured, direct and purposive teaching. Such teaching could be the reason why the historically white schools still have high academic achievement. In these schools the majority of teachers are experienced teachers who are still actively teaching.

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# Factors Effecting on Achievement Motivation in Learning Fundamental Mathematics of Bangkok University's Students

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## Abstract

*At this time, the students are interested Mathematics and they have motivation in learning mathematics less than in the past. The purpose of this research was to study factors effecting on achievement motivation of Bangkok University's students in studying Fundamental Mathematics. The research findings were summarized as follows: Factors effecting achievement motivation of Bangkok University's students in studying Fundamental Mathematics with the level of statistical significance at 0.05, arranged in respective sequences of the high-level to low-level affecting factor, were study habits in Fundamental Mathematics, students' attitude towards Fundamental Mathematics study, adaptation of students and grade of mathematics course. All those factors could explain the achievement motivation of Bangkok University's students in studying Fundamental Mathematics at the 66.91 percent of variance. The prediction equation in term of raw score was constructed.*

## 1. Introduction

At present, we use mathematics to solve problems both direct and indirect ways. Mathematics is a fundamental science to increase knowledge by reasoning. Thus successful completion of at least one mathematics course is typically a requirement in many undergraduate programs. There are many obstacle factors for students to achieve the goal of mathematics course. Soonthorndhai's research [1] was to study "enhance your knowledge toward expected grade" of Bangkok University's students in studying Fundamental Mathematics course. He has suggested that if students have motivation in studying, they will be enthusiastic to learn in mathematics since achievement motivation leads students toward success in studying and drives change. Students needed to succeed knowledge and skill, so they would like to improve themselves to get higher knowledge than

others. They would be more successful. Kitisubkanjana's research [2] has suggested that students having higher achievement motivation will concentrate in lessons and will be successful. Students having lower achievement motivation will not be interested in lessons and will be failed.

Many instructors in Fundamental Mathematics course and researcher alike believe that one of problems in studying Fundamental Mathematics course was that the students were lacking of motivation and enthusiasm. In Fundamental Mathematics course, they applied from going to class lately, absent, not concentrate in the lessons, not review in lessons, not doing homework and copy homework too. From these reasons in the last five years, number of students withdrawing Fundamental Mathematics course were about 30% of the students registered for this course per year.

The concepts of the achievement motivation in learning took from Thai researches, i.e. Pourgsuntear [3], Meenakorn [4], Sanyakul [5], Promnaruritte [6], Krutbout [7], Mitchun [8] and Inchan [9]. The achievement motivation was separated into five categories as follows: 1) The ambition to study Fundamental Mathematics, 2) The enthusiasm in studying Fundamental Mathematics, 3) The risk taking in studying Fundamental Mathematics, 4) The study planning for Fundamental Mathematics and 5) The identity in studying Fundamental Mathematics. These researches believe that the achievement motivation in learning separated into these five categories can use to find the level of the achievement motivation. Some of these researches found that students' ages, students' monthly income, family's monthly income, grade point average, grade of mathematics course, background knowledge of mathematics, time spent in traveling to the university, extra time spent for studying Fundamental Mathematics, study habits in Fundamental Mathematics, adaptation of students, students' attitude towards Fundamental Mathematics study, and students' attitude towards mathematics teacher had effected to the achievement motivation. Thus, the researcher is interested to study in the factors effecting on the

achievement motivation in learning Fundamental Mathematics. These factors will be used to plan for instruction and to improve teaching method, to help and to suggest students in creating their motivation. Finally, they will be successful in studying mathematics.

## 2. Objectives

The objectives of the research were:

- To investigate the level of the achievement motivation of Bangkok University's students in studying Fundamental Mathematics.
- To study the relationship between achievement motivation of Bangkok University's students in studying Fundamental Mathematics and other factors which are students' ages, student's monthly income, family's monthly income, grade point average, grade of mathematics course, background knowledge of mathematics, time spent in traveling to the university, extra time spent for studying Fundamental Mathematics, study habits in Fundamental Mathematics, adaptation of students, students' attitude towards Fundamental Mathematics study and students' attitude towards mathematics teacher.
- To study factors effecting on achievement motivation of Bangkok University's students in studying Fundamental Mathematics and bring those factors to create prediction equation of the achievement motivation in studying Fundamental Mathematics.

## 3. Framework

1. The researcher studied factors effecting on achievement motivation of Bangkok University's students in studying Fundamental Mathematics.

2. The population of the research consisted of 1,067 undergraduate freshmen, from the regular programs of the school of Business Administration and school of Accounting, Bangkok University. These students registered for the Fundamental Mathematics course in the first semester, academic year 2008 at Rangsit Campus.

3. Variables in this research were as follows:

3.1 Independent variables were students' ages, student's monthly income, family's monthly income, grade point average, grade of mathematics course, background knowledge of mathematics, time spent in traveling to the university, extra time spent for studying Fundamental Mathematics, study habits in Fundamental Mathematics, adaptation of students, students' attitude towards Fundamental Mathematics study and students' attitude towards mathematics teacher.

3.2 Dependent variables were achievement motivation of Bangkok University's students in studying Fundamental Mathematics. Achievement motivation separated in five categories as follows:

3.2.1 The ambition to study Fundamental Mathematics

3.2.2 The enthusiasm in studying Fundamental Mathematics

3.2.3 The risk taking in studying Fundamental Mathematics

3.2.4 The study planning for Fundamental Mathematics

3.2.5 The identity in studying Fundamental Mathematics

## 4. Definitions

1. Achievement Motivation (MOTI): achievement motivation of Bangkok University's students in studying Fundamental Mathematics course. It's separated into five categories as follows:

1.1 The ambition to study Fundamental Mathematics means desire to have better scores than others.

1.2 The enthusiasm in studying Fundamental Mathematics means doing homework immediately, asking teacher when they suspect, trying to develop oneself in studying and having fun in studying.

1.3 The risk taking in studying Fundamental Mathematics means knowing oneself in studying, trying to do hard homework and enjoying to class participation.

1.4 The study planning for Fundamental Mathematics means having aim and target to study in Fundamental Mathematics, regularly review lessons exam preparation and taking exam carefully.

1.5 The identity in studying Fundamental Mathematics means being higher self – confident, doing homework by oneself and self – resolution.

2. Students' monthly income (ISTU): students' income per month.

3. Family's monthly income (IGUA): family's income per month.

4. Students' grade point average (GPA): students' grade point average before study at Bangkok University.

5. Students' grade of mathematics course (GMATH): students' grade of mathematics course before study at Bangkok University.

6. Students' background knowledge of mathematics (BMATH): scores from the Mathematics Placement Test.

7. Students' time spent in traveling to the university (TRAVT): students' traveling time to attend the class.

8. Students' extra time spent for studying Fundamental Mathematics (TMATH): students' extra time spent for studying Fundamental Mathematics out

of the class, e.g. searching the other exercises from the library, etc.

9. Students' study habits in Fundamental Mathematics (HMATH): students' behavior in Fundamental Mathematics course e.g. never or sometimes absent, interested in lesson, doing homework by oneself, etc.

10. Adaptation of students (ADAP): adaptation of students about friends, study, life in university, etc.

11. Students' attitude towards Fundamental Mathematics study (ATMATH): students' opinion, feeling, satisfactory towards Fundamental Mathematics study.

12. Students' attitude towards mathematics teacher (ATTEA): students' opinion, feeling, satisfactory towards mathematics teacher about knowledge, instruction or behavior.

## 5. Anticipated benefits

1. To make use of the research results for further planning and development Fundamental Mathematics instruction to increase achievement motivation in learning Fundamental Mathematics.

2. To utilize factors effecting on achievement motivation in learning Fundamental Mathematics in order to increase achievement motivation in learning Fundamental Mathematics.

## 6. Methodology

### 6.1. Research Sample

The survey technique was used in this research. The population of the research consisted of 1,067 undergraduate freshmen, from the regular programs of the school of Business Administration and school of Accounting, Bangkok University. These students registered for the Fundamental Mathematics course in the first semester, academic year 2008 at Rangsit Campus. The samples were selected by using the Stratified Random Sampling technique and Simple Random Sampling as follows:

Stage 1: The researcher used the Stratified Random Sampling technique to classify the population into 3 groups, which were of the school of Business Administration (curriculum 4 years), the school of Business Administration (curriculum 2 years), and the school of Accounting, Bangkok University.

Stage 2: The researcher used the Quota Sampling technique by proportion.

The sample size was calculated based on [10]

$$n = \frac{NZ^2S^2}{(N-1)e^2 + Z^2S^2}$$

(e = 0.085 and Z = 1.96)

In this research, the population was 1,067 students. Therefore, the sample size was 427 students as shown in Table 1.

**Table 1. The sample size of each group**

School and curriculum	Sample size
The school of Business Administration (curriculum 4 years)	316
The school of Accounting	73
The school of Business Administration (curriculum 2 years)	38
<b>Total</b>	<b>427</b>

## 7. Research Instruments

This research design was a kind of qualitative approach. In order to achieve the purpose of this study, the researcher utilized a survey questionnaire as a research tool. Prior to sending to the respondents, the questionnaire was pre-tested with a sample group of 31 students who were not selected to participate in the study in order to verify the meaning of the concept and content validity. Concerning the reliability of the questionnaire, Cronbach's alpha coefficient value was between 0.769 – 0.923 as follows:

1. The Mathematics Placement Test: The reliability of the test was 0.867.

2. The Questionnaire was divided into 6 parts as follows:

Part 1 Student's personal data. This part consists of blank filling and multiple – choice questions.

Part 2 Test of Study habits in Fundamental Mathematics class: The reliability of the test was 0.923.

Part 3 Test of Adaptation of students: The reliability of the test was 0.898.

Part 4 Test of Students' attitude towards Fundamental Mathematics study: The reliability of the test was 0.889.

Part 5 Test of Students' attitude towards mathematics teacher: The reliability of the test was 0.905.



Part 6 Test of Achievement Motivation in learning Fundamental Mathematics separated in five categories as follows:

6.1 The ambition to study Fundamental Mathematics: The reliability of the test was 0.868.

6.2 The enthusiasm in studying Fundamental Mathematics: The reliability of the test was 0.859.

6.3 The risk taking in studying Fundamental Mathematics: The reliability of the test was 0.769.

6.4 The study planning for Fundamental Mathematics: The reliability of the test was 0.839.

6.5 The identity in studying Fundamental Mathematics: The reliability of the test was 0.828.

The questionnaire has been measured using a 5-point response format ranging from 1 = never or strongly disagree to 5 = always or strongly agree.

## 8. Data Collection

The researcher collected the data in the first semester, academic year 2008 (June - September 2008). The students did the Mathematics Placement Test at the first period of the Fundamental Mathematics course (about the first week in June). It consisted of 25-multiple choice questions, worth 25 points and it took 60 minutes to complete. At the first week in August, the researcher collected the questionnaires from the students in his or her classroom.

## 9 Data Analysis

2. There were 8 factors related to achievement motivation of Bangkok University's students in studying Fundamental Mathematics with the level of statistical significance at 0.01. Factors related to achievement motivation of Bangkok University's students in studying Fundamental Mathematics at high level were study habits in Fundamental Mathematics and students' attitude towards Fundamental Mathematics study. Factor related to achievement motivation of Bangkok University's students in

The researcher used the SPSS for windows to examine the descriptive statistics and inference statistics as follows:

Step 1 Descriptive statistics: frequencies, percentage, mean and standard deviation (SD).

Step 2 The Pearson Product Moment Correlation Coefficient: compute all concerned variables in this study.

Step 3 Multiple Regression Analysis: determine the contribution of dependent variable to predict achievement motivation of Bangkok University's students in studying Fundamental Mathematics.

## 10. Conclusion

The research findings were as follows:

1. The overall achievement motivation of Bangkok University's students in studying Fundamental Mathematics separated in five categories was at moderate level. When considered separately, the category of the ambition to study Fundamental Mathematics was at high level. Other categories were at moderate level, arranged in respective sequences of mean score from high level to low level, which were risk taking in studying Fundamental Mathematics, enthusiasm in studying Fundamental Mathematics, study planning for Fundamental Mathematics and identity in studying Fundamental Mathematics. The level of the achievement motivation of Bangkok University's students in studying Fundamental Mathematics as shown in Table 2.

**Table 2. The level of the achievement motivation of Bangkok University's students in studying Fundamental Mathematics**

<b>The achievement motivation of Bangkok University's students in studying Fundamental Mathematics</b>	$\bar{X}$	<b>SD.</b>
The ambition to study Fundamental Mathematics	3.78	0.63
The risk taking in studying Fundamental Mathematics	3.30	0.59
The enthusiasm in studying Fundamental Mathematics	3.18	0.62
The study planning for Fundamental Mathematics	3.18	0.65
The identity in studying Fundamental Mathematics	3.08	0.65
<b>Average</b>	<b>3.31</b>	<b>0.53</b>

studying Fundamental Mathematics at relatively low level were grade of mathematics course, adaptation of students, background knowledge of mathematics, and students' attitude towards mathematics teacher. Factors related to achievement motivation of Bangkok University's students in studying Fundamental Mathematics at low level were grade point average and extra time spent for studying Fundamental Mathematics. Correlation coefficients among variables as shown in Table 3.

**Table 3. Correlation coefficients among variables**

Variables	AGE	ISTU	IGUA	GPA	GMATH	BMATH	TRAVT	TMATH	HMATH	ADAP	ATMATH	ATTEA	MOTI
AGE	1.000	0.396**	-0.007	0.101*	0.021	-0.168**	-0.016	-0.020	0.005	-0.085	-0.105*	0.013	-0.018
ISTU		1.000	0.174**	0.065	0.007	-0.054	-0.149**	-0.061	-0.013	0.103*	-0.116*	0.101*	-0.029
IGUA			1.000	-0.013	0.036	0.086	0.016	0.006	0.031	0.034	-0.030	0.000	0.003
GPA				1.000	0.448**	0.120*	0.082	-0.061	0.251**	0.092	0.048	-0.031	0.134**
GMATH					1.000	0.353**	-0.013	-0.031	0.351**	0.122*	0.313**	-0.016	0.368**
BMATH						1.000	0.014	-0.090	0.278**	0.097	0.458**	0.008	0.331**
TRAVT							1.000	0.032	-0.072	-0.060	-0.103*	-0.190**	-0.072
TMATH								1.000	0.197**	0.079	0.136**	0.081	0.128**
HMATH									1.000	0.323**	0.572**	0.275**	0.755**
ADAP										1.000	0.272**	0.335**	0.351**
ATMATH											1.000	0.392**	0.665**
ATTEA												1.000	0.312**
MOTI													1.000

\*p < .05 \*\*p < .01

3. Multiple regression analysis by enter method was determine the contribution of dependent variable to predict achievement motivation of Bangkok University's students in studying Fundamental Mathematics as shown in Table 4 and Table 5.

Factors effecting on achievement motivation in learning Fundamental Mathematics of Bangkok University's students with the level of statistical significance at 0.05, arranged in respective sequences

of the high-level to low-level affecting factor, were study habits in Fundamental Mathematics, students' attitude towards Fundamental Mathematics study, adaptation of students and grade of mathematics course. All those factors could explain the achievement motivation in learning Fundamental Mathematics of Bangkok University's students at the 66.91 percent of variance.

**Table 4. Multiple regression analysis by enter method**

Variables	b	SE <sub>b</sub>	β	t	Sig.
HMATH	0.554	0.039	0.535	14.303**	0.000
ATMATH	0.251	0.033	0.314	7.620**	0.000
GMATH	0.061	0.022	0.093	2.733**	0.007
ADAP	0.091	0.035	0.081	2.576**	0.010
AGE	0.009	0.014	0.20	0.622	0.534
ATTEA	0.017	0.035	0.016	0.483	0.629
TRAVT	0.000	0.000	0.012	0.421	0.674
BMATH	0.001	0.003	0.007	0.197	0.844
ISTU	0.000	0.000	-0.001	-0.029	0.977
IGUA	0.000	0.000	-0.011	-0.378	0.706
TMATH	-0.004	0.004	-0.028	-0.951	0.342
GPA	-0.079	0.040	-0.063	-1.959	0.051
R = 0.821			R <sup>2</sup> = 0.6740		

\*\*p < .01

**Table 5. Multiple regression analysis by enter method only variables which have level of statistical significance at 0.01**

Variables	b	SE <sub>b</sub>	β	t	Sig.
HMATH	0.536	0.037	0.518	14.416**	0.000
ATMATH	0.265	0.028	0.331	9.488**	0.000
ADAP	0.089	0.033	0.079	2.669**	0.008
GMATH	0.046	0.020	0.070	2.318*	0.021
<b>R = 0.818</b>	<b>R<sup>2</sup> = 0.6691</b>	<b>a = 0.287</b>	<b>F = 213.486**</b>		

\* p < .05 \*\*p < .01

The prediction equations of achievement motivation in learning Fundamental Mathematics of Bangkok University's students in raw scores and standard scores were as follows:

The prediction equation in term of raw score was:

$$\hat{Y} = 0.287 + 0.536\text{HMATH} + 0.265\text{ATMATH} + 0.089\text{ADAP} + 0.046\text{GMATH}$$

The prediction equation in term of standard score was:

$$\hat{Z} = 0.518\text{ZHMATH} + 0.331\text{ZATMATH} + 0.079\text{ZADAP} + 0.070\text{ZGMATH}$$

## 11. Acknowledgment

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# Learning Science through Physical Activity and Sport

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## Abstract

*Science education is a vital component of today's classrooms. However, under the current education system, science understanding may not reach all students, as the same misconceptions elementary students mirror those of college students. Therefore, the project goal was to provide a relevant, engaging curriculum themed around sport and physical activity to teach science in a local afterschool program. The learning outcomes assessment included a pre- and post-evaluation based on physical and biological science concepts. Overall, post-evaluations showed that students were able to learn science concepts through this project, and students described scientists more positively in the post-evaluations. This research indicates the effectiveness of using sport and physical activity as a means of teaching science concepts in an afterschool setting for elementary-aged students.*

## 1. Introduction

Student knowledge and understanding is noted as being a primary goal of science education [1]. It is the foundation for understanding, participating and addressing the challenges and needs of our world and society. Science understanding allows people to use science to enhance their lives, work in a technologically-sophisticated world, and make sound decisions based on scientifically-based reasoning.

Though science plays a critical role in our society, students are sometimes left behind when it comes to scientific understanding. For example, US national educational standards suggest that students should understand the specifics of anatomical and physiological systems and how these systems work together to meet the essential requirements for life [2]. However, alternative conceptions of the cardiovascular system held by elementary students mirror those held by 60% of collegiate students [3]. Thus, this goal of content knowledge and conceptual understanding may not be currently met with today's standard educational practices.

A key to enhancing scientific understanding and knowledge may reside in providing education that presents accurate information in a more meaningful and exciting manner. As such, we choose to use sports and physical activity as a means for teaching science. In the US, over 38 million children participated in organized sports activities [4]. With a high interest in sports, the goal of this project was to leverage science education through sport and physical activity.

The objective of the project was to enhance the science knowledge and understanding in students participating in an afterschool program (ages: 6-12 years). The central hypotheses are in developing and implementing a movement- and science-based curriculum, the afterschool program participants will gain an increased understanding of science, while gaining a more positive view of scientists.

## 2. Theoretical Framework

This project draws from social constructivism theory. Social constructivism frames student learning as a dynamic, iterative process developed through social interaction with other students [5]. This is that students construct their knowledge through a socially-negotiated practice of understanding [5], [6], [7]. They develop understanding based on prior ideas and experiences [8], [9] and through physical and mental manipulation of objects [10]. A key to facilitating learning through this approach is to enable students to successfully accommodate new information and to effectively interact and discuss with their peers their perspective of the topic at hand [8].

From the constructivist framework, students generate the meaning from the experience and activities and relate their understanding to prior experiences and existing concepts. For this study, the shared experience for the students was the implemented physical activity modules. Many students already had pre-conceived ideas about sports and physical activities. However, we felt that most students at the elementary age may not have explored how science plays a role in these activities. Using sport and physical activity as a means for

providing relevancy, the underlying assumption was that students would be more engaged in the material and would promote learning [11].

### 3. Methods

This study was a longitudinal research assessment to determine the efficacy of a collegiate service-learning project in an afterschool program setting. Three undergraduate students implemented the lesson plans to the afterschool program participants.

#### 3.1. Participants

Twenty-six students from a local elementary school's afterschool program participated in this study, which included 17 boys and 11 girls. Average age (standard deviation) for the afterschool participant was 10.2 (1.3 years), and the ages ranged from 6 to 12 years.

With project approval from the afterschool program director, school administrators, the University's Institutional Review Board, student selection criteria were: 1) signed assent and consent forms by the student and legal guardian and 2) responses to both the pre- and post-evaluation. All parties were informed of their rights as study participants. This population of students was chosen through proximity to the University

The student sample was 65% Hispanic, 27% White, and 8% Multiracial/Other, with 54% of the sample eligible to receive free or reduced lunches (low socio-economic status [SES]). Most students' primary language spoken at home was Spanish (54%), with the remaining 46% speaking English at home.

#### 3.2. Curriculum and Instruction

This project addressed the need for curriculum development, content support, and increased use of inquiry learning to promote science using a team of three undergraduate kinesiology and education students acting as visiting scientists the afterschool program.

The first five weeks of the project consisted of the University students developing the learning modules for the afterschool participants in addition to visiting the after school program to see the "realities of teaching" within this framework. The modules developed centered on biomechanics (how people move), showing how the physical sciences play a role in sports and activities, and physiology (how the body works), showing a how the body responds to movement. Each module had a sports or activity theme, such as running, jumping, basketball, soccer and baseball. Each module was led by one of the university students, with the other two students

acting as assistants in implemented the science modules at the afterschool program.

The next 8 weeks consisted of the University students implementing their modules, while also revising and editing their lessons as appropriate. Each lesson was approximately 90 minutes, with appropriate breaks as necessary.

Within these lesson plans, the use of technology was promoted through the use of Vernier's LabQuest and sensors (Vernier Software & Technology, Beaverton, OR, USA). Specifically, this equipment showed the electrical signaling of the muscles and heart, systolic and diastolic blood pressure, and forces that create motion. This technology allowed the afterschool participants to how science and technology are used in their everyday world.

#### 3.3. Analysis

Afterschool participants were asked to respond to twelve questions on a pre-post evaluation designed to elicit their conceptual understanding of the physical and biological sciences based on their grade-level. Questions were developed from the statewide educational assessment (Texas Essential Knowledge and Skills [TEKS]). The assessments were only provided to the third through fifth graders (N = 14) in the afterschool program because these are the grades where statewide testing begins. A sample of the fifth graders questions is shown in the appendix.

Student pre-post evaluations for the science questions were calculated into POMP scores, and the subsequent statistical results utilized these values [12]. Analysis of variance with a covariate of the pre-test score was used to understand the learning outcomes, with a Tukey post-hoc analysis for the different student populations (e.g. gender and SES).

There were also five open-ended questions that explored the afterschool participant's view of science and how the heart works. To answer the open-ended, students were able to use drawings, words, or phrases to explain their responses. Students create images to make sense of their everyday experiences and understanding of the world [13]. All responses to the open-ended question were initially reviewed to develop codes associated with recurring themes, which were scored for use with statistical analysis.

The coding analyses in the open-ended questions and the design problem followed a content-driven systematic iterative process of text interpretation and categorization to establish patterns of importance [14]. First, the project assistants independently reviewed the data to identify meaningful descriptions or noteworthy statements related to the research questions. After meeting to compare preliminary findings and debate interpretations, they developed coding strategies through consensus; themes were subsequently derived from the series of coded statements to establish the main findings. The

reliability of the analysis was strengthened by the diversity of perspectives that functioned as checks and balances in the analytic process and through a post-analysis examination for conflicting or disconfirming evidence [15].

The threshold for statistical significance was set at  $p = 0.05$ ; however, actual  $p$ -values are reported in the following section for clarity. Statistical analysis software used included SPSS 15.0 (SPSS Inc, Chicago, IL, USA) and NVivo 7.0 (QRS International, Melbourne, Australia). All evaluations were not examined or assessed until the conclusion of the project.

#### 4. Results

Overall, student learning was affected through the activities. From pre- to post-evaluation, scores were significantly higher (t-test,  $p = 0.052$ ) for the multiple-choice questions (Figure 1). Post-hoc analysis revealed that Spanish-speaking students made significantly greater gains ( $p < 0.043$ ) than English-speaking students (a 61.2% gain for primary Spanish-speaking students versus 56.2% gain for primary English speakers).

Though the pre-evaluations were not examined until the conclusion of the project, the pre-evaluation can indicate areas of confusion or misconception by students on a given topic. The pre-evaluation indicated uncertainty regarding what a force is and how it directs motion. However, post-test scores show that many students noted that that force was with respect to mass and acceleration.

In the pre-post evaluations, students also circled words to describe a scientist (Figure 2). From pre- to post-evaluation, the view of a scientist changed. Pre-evaluation, the top responses were: old, smart, strange. Post-evaluation, the afterschool participants described scientists as creative and fun as the top

responses, while normal, smart, and wise all were the third highest response. Along these same lines, students were more apt to see themselves as a scientist in the post-evaluation in comparison to the pre-evaluation (76% post-evaluation vs. 27% pre-evaluation).

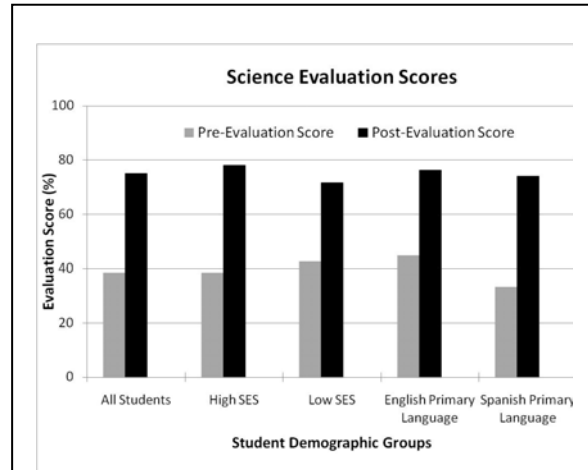


Figure 1. Student pre-post evaluation scores.

\*SES = Socioeconomic Status, based on free/reduced lunch status. Gains were all statistically significant ( $p < 0.05$ ) from pre-to post-evaluation

#### 5. Discussion

The purpose of this study was to assess the science educational outcomes of participating in an afterschool program with a science- and movement-based curriculum. Strong gains were noted in the afterschool participants learning of the sciences as noted through the pre-post assessments. Moreover, students also showed a more positive view of a

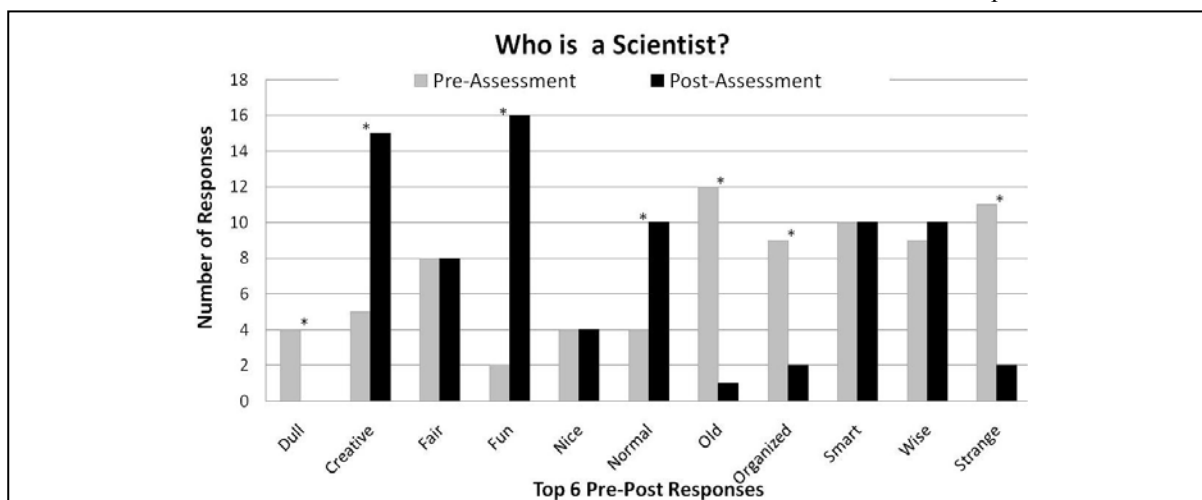


Figure 2. Top six responses to the question on who is a scientist.  
\* = significant change ( $p < 0.05$ ) in number of respondents

scientist post-activity, with strong increases seen in the more positive responses provided in the question: Who is a Scientist (see Figure 2)?

Science is often defined by particular constructs and models that make it abstract to the student. However, previous research suggests that when students are exposed to relevant curriculum, student learn more and are more engaged. For individuals to learn, they must be engaged [11]. Engagement requires innovative problem solving that models the practices of day-to-day experiences. In teaching science through movement, students are positioned to explore and connect science to something they are familiar with on a familiar level: sports and physical activity. While there are some limitations to the present study, the insights gained are useful in promoting physical activities and sports as a means of teaching science concepts. One limitation is that the pre-post evaluation was 12 questions, which is not sufficient to understand student knowledge and conceptual understanding gained through participating in this activity. Additionally, without a control group, it not possible to assess gains of this type of teaching versus a more standard lab- or lecture-based curriculum.

Despite these limitations and due to the positive results shown through teaching science through physical activity, there is a need for increased research into teaching science in non-traditional venues, such as through sport and physical activity.

## 6. Acknowledgements

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# Attitudes towards Marriage in Students of the University of Shiraz

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## Abstract

*The purpose of the present study is to investigate the attitudes of the students of the University of Shiraz towards marriage. Research questions are: 1. Are students' marital attitudes more inclined towards traditionality or modernity? 2. Is there any significant difference between the male and the female marital attitudes in students? 3. Is there any significant difference between the graduate and undergraduate students with regard to their attitudes towards marriage? 4. Is there any significant difference between urban and provincial students with regard to their attitudes towards marriage? To answer these four questions, a questionnaire with 29 Likert-scale items was designed. The society population is 1450 and the sample of 280 university students includes 135 male and 145 female participants. The results convey that students hold a modern attitude towards marriage. Besides, there was a significant difference between male and female students with regard to their attitudes towards marriage. Female students held a more modern attitude towards marriage compared to the males. Furthermore, urban citizens hold a more modern attitude compared to provincials. Finally, there was no significant difference between B.A. and M.A. students in their attitudes towards marriage. The results show a transition from traditionality to modernity is taking place in marriage and family life.*

## 1. Introduction

Iran's society is undergoing a transition from tradition towards modernity. Such transition leads to different consequences in various realms including that of marriage establishment and family. Expectantly, family life and marriage as establishments undergo serious changes in a transitory state. Lower rates of marriage, elder marriage age, and immediate divorces are among the challenges that marriage and family life confront in transitory states. Usually, economic problems are deemed as the root of these predicaments by social thinkers in Iran. Yet, as evidence proves, a change in cultural circumstances, namely the individuals' attitudes towards marriage and family, bear a more significant role than the economic situation. This

shift in attitudes seems more drastic in female adults than in the males.

## 2. Literature Review

Most of Islamic societies are undergoing a transition from traditional structures and mentality to modern ones. Such a transition has drastically influenced various aspects of personal and social life. Women's role in evolving societies is a significant topic for research.

For instance, Haddad (qtd. in Zahed and Khajeh Nouri), has explored the role of Arab women in the Islamic sphere as well as the situation of women in the contradictory domain of tradition and modernity [11]. Here, the dissidence of the Arab élite, whether secular nationalist or Islamic fundamentalist, over the issue of women has been hinted at. Moreover, he has talked about a crisis that the evolving Arab world is facing. The article has concluded that rise of fundamentalism further complicates the challenges of women's role and status, because Arab fundamentalists hold incongruent views about women.

John Spozito (qtd. in Zahed and Khajeh Nouri), has asserted that the influence of Islam on women and their associations with men in Islamic societies cannot be denied [11]. He has concluded that it was men who championed the female emancipation cause first, but Muslim women soon followed in demanding religious, educational and social reforms.

Family is one of the realms that are most affected in the transition from traditionality to modernity. As Behnam has remarked, families in the evolving third world countries, especially in urban contexts, face serious challenges [2]. Demographically speaking, young population, its uncontrolled growth, as well as (im)migration are the major causes of these challenges. New attitudes and inclinations in such societies usually disturb the mental and cultural balance. As the result, the roles of family members, especially women, evolve constantly. In addition, generation gap widens up.

Contemporary Iran features an Islamic society which is undergoing a transition from traditionality to modernity, hence it is subject to the above-mentioned circumstances. Just a small number of research projects concerning the impacts of such transition on personal and social life, especially



family and marriage, are available. There is a huge bulk of research on marriage most of which, still, disregard the impact of traditionality and modernity. The criteria for marriage have been explored without considering the relationship of these criteria with the transition from traditionality to modernity.

For example, Heydari et al has investigated the criteria for marriage among the single students of the Medical School of the University of Mazandaran [3]. The result is that the criteria for marriage among the single male students are mutual understanding, partner's faithfulness, irresponsibility, charms and pre-marriage acquaintance respectively. While, for female students, mutual understanding, faithfulness, parents' consent, pre-marriage acquaintance, love, irresponsibility and charms count respectively.

Samani and Ryan have inspected important criteria for marriage and age preferences among Shiraz University students [8]. The results convey that commitment, chastity, spruceness and health are four important criteria for spouse selection among single and married men and women in Iran. Samani has also examined the criteria for choosing one's marital partner among single university students in Iran. The results clarify that the top ten criteria for spouse selection among female students are: chastity, virtuousness, piety, education, origin, financial status, employment, commitment, social skills and social prestige. While, male top ten priorities are: charm, chastity, education, origin, virtuousness, piety, personal traits, social skills, housekeeping skills, commitment and financial status.

In a similar study, Husseini *et al* have probed the priorities of marriage criteria among 504 marrying couples in Tehran [5]. The results convey that top priorities in marital partner selection are: origin, lack of physical disabilities, decency, and belief in the equity of men and women. Religio-cultural sanding is the least important criterion.

Yet, very few studies on marriage and family have been concerned with tradition and modernity. For instance, Askari *et al* have investigated the evolution of, hence differences between generations with regard to their attitudes and values towards marriage and family life among mothers and daughters from Yazd [1]. Results confirm that both generations agree on the proper age for marriage and their dismissal of polygamy. On the other hand, there is a significant difference in the attitudes of mothers and daughters with regard to consanguine marriage, spouse selection parameters and celibacy. Daughters hold more modern attitudes with regard to these issues. Researchers have concluded that the notion of family and its attributes is evolving in Iran.

Shamshiri has found that the transition from traditional system of values to a modern one and the resulting crisis have led to such consequences as increase in marriage age or even apathy towards marriage among Iranian youngsters [10].

Mohammadi et al. have also investigated the criteria for spouse selection among maidens in Tehran. The results convey that religio-cultural criteria occupy a secondary degree of importance in comparison to socio-economic aspects. Researchers have accounted for this as the result of political, social, cultural and economic changes; modernization; urbanization and the diffusion of Western culture.

Movahhed et al. have studied marriage from a different perspective [6]. They have studied young maidens' attitudes towards traditional and modern values with regard to the integrity of pre-marriage personal association of boys and girls. The results affirm that society is undergoing a vast evolution from a traditional to a modern set of values with this regard. However, maidens are still hesitant between modern and traditional values. Similarly, Ghane'i and Khosrokhavar has also conclude, that the expanding university admission of Iranian girls and their inclination to pursue with their studies have greatly impacted the diffusion of modern values as well as girl's demand for the establishment of modern families [4].

All in all, any research on family and marriage in Iran should consider traditionality versus modernity. Yet, the research so far conducted concerns the investigation of the criteria for spouse selection. Thus, the present study will not only compliment previous research, but it also looks at the issue from a novel perspective. This study aims to investigate the university students' attitudes towards marriage, considering the socio-cultural transition from traditionality to modernity.

### 3. Analysis of Findings

This research aims to explore the male and female students' attitudes towards marriage in the University of Shiraz. Research questions are:

- Are students' marital attitudes more inclined towards traditionality or modernity?
- Is there any significant difference between the male and the female marital attitudes in students?
- Is there any significant difference between the graduate and undergraduate students with regard to their attitudes towards marriage?
- Is there any significant difference between urban and provincial students?

Case of this study was the School of Education and Psychology of the University of Shiraz. The society's population was 1450 graduate and undergraduate students. Twenty percent of the society, i.e. 135 male students and 145 female students, were chosen as the sample. The participants' age mean was 22.46 with the standard deviation of 3.49. A questionnaire was prepared to measure the marriage attitudes in students.

This questionnaire included:

- demographic data;
- Likert-type items;

Twenty nine items are scored using Likert-scale (agree, no idea, disagree).

The maximum grade of the Likert-scale test was 80, the minimum 39, and the median was 58. The closer the grade to 80, the more modern the attitude towards marriage. And, the closer the grade to 39, the more traditional the attitude towards marriage. The reliability of the test was determined by Cronbach's Alpha and the result was 0.81 which confirm the acceptable reliability of the test.

220 of the participants were urban citizens, 46 provincials and 14 did not specify their residence. In other words, 82.7% of the participants were urban, and the 17.3% rural. 229 participants (81.5%) were B.A. students, while 50 (17.8%) were M.A. students. The educational status of one of the participants was not specified.

The following findings were deduced to this research's questions:

1. Are students' marital attitudes more inclined towards traditionality or modernity?

The mean grade of all participants was 65.43 and its standard deviation was 8.38.

2. Is there any significant difference between the male and the female marital attitudes in students?

The findings are illustrated in Figure 1.

Gender	Mean	Standard Deviation	Degree of Freedom	T test	Significance
Female	69.66	6.86	242	9.13	0.01
Male	61.19	7.61			

Figure 1. T-Test of gender difference in the attitude towards marriage

3. Is there any significant difference between the graduate and undergraduate students with regard to their attitudes towards marriage?

The findings are illustrated in Figure 2.

Education	Mean	Standard Deviation	Degree of Freedom	T test	Significance
B.S. student	64.94	7.95	241	1.86	NS
M.A student	67.51	9.87			

Figure 2. T-Test of educational difference in the attitude towards marriage

4. Is there any significant difference between urban and provincial students?

The findings are illustrated in Figure 3.

Residence	Mean	Standard Deviation	Degree of Freedom	T test	Significance
Urban	65.88	8.57	231	1.91	0.05
Provincial	63.14	7.47			

Figure 3. T-Test of residual difference in the attitude towards marriage

## 4. Contribution to Knowledge

The present research offers a twofold contribution to our current understanding of marriage and family life. First, a novel instrument has been designed to measure the modern/traditional attitude towards marriage. In fact, this seems to be the first of its kind in Iran and similar societies. This instrument can be used as an appropriate scale to distinguish modern and conventional attitudes towards marriage.

Second, considering the scarcity of studies on the modernity-traditionality conflicts with regard to marriage among Iranian youngsters, the present research, at least partly, illuminates the attitude of marriage among Iranian university students. The results confirm that this attitude is evolving towards a more modern one.

## 5. Conclusion

As the results show (M=65.43 and SD=8.38), both men and women hold a rather modern attitude towards marriage. The significance of gender difference in the attitude towards is 0.01. That is to say, women hold a more modern attitude towards marriage than men. Moreover, there was no significant difference between B.A. and M.A. students. In addition, a 0.05 significant difference was observed between rural and provincial students.

As the literature review shows, there has not been a similar study conducted in Iran. That is to say, the attitude towards marriage has not been investigated with an eye for the transition from traditionality to modernity. Besides, the instrument introduced and used in this study is the first of its kind.

In Iran's society which is undergoing a transition from traditionality to modernity such studies are necessary. Despite the scarcity of similar research, the results agree with similar studies. The results confirm those reached at by Askari *et al* and Mohammadi *et al* [1], [6]. Of course, as mentioned above, these studies have not been directly concerned with the investigation of modernity and traditionality in marriage, and have only indirectly concluded that a modern attitude towards marriage is given rise to among Iranian girls.

## 6. Future Work

Considering the transitory state of Iran, conducting similar studies is vital. Such studies will not only deepen our understanding of current circumstances but also provide a prognostication of the transition aftermath. Besides, such studies can be useful in proposing solutions for the post-transition problems. So, it is intended to expand this study to the other schools of the University of Shiraz and

even other Iranian universities. Moreover, further cross-cultural research will be conducted in Third World countries which are facing a similar transitory state, if the necessary facilities will be provided.

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## **Session 6: Curriculum, Research and Development**

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# Sideling Arabic: Language Concerns in the Middle East

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## Abstract

*A heavy emphasis is placed on English in many curriculums and English is becoming the medium of instruction in many parts of the Arab World. In many contexts, the native Arabic speaking students are required to pursue their education in the English language in higher education institutions. The heavy emphasis on English is beginning to sideline the Arabic language, an issue which has spurred concern at many levels. This paper examines the reasons behind the concerns voiced in many of these countries.*

## 1. Introduction

The topic of language has resurfaced in many discussions, debates and controversies. Due to globalization, defined by Wikipedia and now considered by many, as “the new form of colonialism,” and a “transnational circulation of ideas, languages or popular culture through acculturation”, and the rampant spread and heavy emphasis on English in the school and the work place, many are beginning to view this language as a threat to their national linguistic and therefore, cultural identities. Many believe that what is beginning to be seen today are remnants of cultures. Today’s globalized world is seemingly producing, using Kramsch’s (as cited in Hinkel [16]) terms, ‘surface cultures’ portrayed merely by “foods, fairs, folklore, and statistical facts”. And today’s globalized system of education is accused of aiding and abetting in either erasing weak cultures or blurring and overshadowing stronger ones. The Middle East, with its relatively strong cultural backgrounds, is not an exception. The rampant spread and emphasis on English accompanied by a relatively American pop culture is beginning to sideline Arabic resulting in the linguistic and therefore cultural loss of those who identify with it in

many areas of the Arab World. There are many factors that this is a result of, but the most prominent of which is globalizations’ impact on education and the manifestation of ideologies through the use of language.

The Middle East countries face many challenges from democracy and building a strong construction of their part of the world, to globalization and the attempt to catch up with the international scientific and economic developments [1]. One of the challenges that has prevented even the wealthy countries in this region to fully become active participants on the international level is the weak education systems in the region. The relationship between education and development in today’s global context, with the shift in control of domestic economies away from national and towards global, has also raised questions as to whose economic and cultural goals and interests are being served by education [21]; how far can states promote ‘national culture’ through education and what forms should these take in pluralistic societies are questions that today’s Arab world governments are struggling with [14].

Education has always been the main venue for knowledge which could either be objective or infused with subjective ideologies, with explicit or implicit agendas and intentional or unintentional consequences. This has been the case throughout history and differed according to times, contexts and agendas. Education today is believed to have “become the key venue to support globalization” and the “primary site for the creation and transmission of such ideologies which “can be seen worldwide in (1) the adoption of economic values and the naturalization of new objectives and comitant practices in schools and universities, (2) the priority assigned to certain subject matters and fields of study over other, and (3) the disregard, and sometimes plain erasure, of certain knowledge, particularly that which might contest points 1 and 2” [29]. And higher education is believed to have been reshaped

according to a “standardized Anglo-American model” that is molded into “neoliberal economic reforms and managerial styles” [30].

## **2. Importing education: Raising new concerns**

In order for the Arab countries to participate in the globalized world and compete in the 21<sup>st</sup> century global economic system with its highly competitive market, they need to work on their education system to improve their human capital by developing their populations' skills and technical knowledge. The Arab world region has been identified by a 2005 UNESCO report, as the least research-and-development-intensive area in the world, and according to The World Bank report released in 2008, their educational institutions are still “not yet fully equipped to produce graduates with the skills and expertise necessary to compete in a world where knowledge is essential to making progress” [19]. So the goal for these countries is to improve education. To meet such a goal, many countries, especially those in the Arab Gulf are allocating major portions of their budgets on education and we are seeing an unprecedented rapid expansion of education, with changes in goals, policies, curricula, contents, and methods. But one of the problems encountered is the insufficient number of teachers who can keep up with the pace at which education is expanding and who are qualified and equipped with the new knowledge that is required. Such a context requires education researchers, policy-makers, and practitioners to differentiate and re-think education and learning, both within and outside the school system [5].

Desperate times call for desperate measures. One of the measures taken is tapping into Western academics to run their public education system with “Westerners filling key positions” at these institutions and government agencies [23]. But nothing comes without a price. The imported education came with ideals and values seen as exclusively tied to the Anglo-American model and to a large extent, reinforced by the medium of English. English has “become one of the few enduring facts of global modern life...a phenomenon which lies at the heart of globalization” that is “redefining national and individual identities worldwide” [13].

Such a situation has begun to create concerns voiced by individuals both within these countries as well as individuals from outside these countries. Many are skeptical in regards to these institutions, the

imported knowledge, the rampant use of English, and the ‘open society’ that have come with them. Krieger [20] sees that “Opening branches of marquee American universities” may improve these countries’ “international cachet,” but questions if this is “the best way for these [countries] to improve their education systems.” Krieger [19] quotes many experts who say that “what works in America will not necessarily work in the Middle East, nor necessarily be in students’ best interests” and “may be getting more than they bargained for.” One of these is Haykel, a professor of Near Eastern studies at Princeton University, who says “I’m not sure [these] countries have thought through the implications of creating this kind of open society...Places like Beirut were a valve for the region, attracting people from all Arab countries because of its liberal atmosphere, but that also made the country very politically volatile and combustible at the time.” Ezzine, a middle East specialist for the World Bank who oversaw its recent report on education in the Arab world, says “a good university is not just a university that borrows a curriculum or a few teachers from another prestigious university.” Tetreault, a professor of international affairs and a gulf specialist at Trinity University in Texas, is quoted as saying, “There is a big question of how these American institutions that are coming fit with the cultural expectations, and within these political wars going on for larger social control between religious and secular groups in the gulf.” Tetreault says that one of the problems is putting in programs “that kids can’t succeed at, because they are not up to speed.” Another problem they will be faced with is “hav[ing] a huge generation of people coming out of these institutions that will not be connected in any kind of organic way to society as a whole, a generation of people who can’t even speak to their parents” and this “is going to have massive social repercussions—some positive, but definitely some negative as well”. One evident negative concern surfacing is the fear of losing their native ethnic identity.

Such problems have seemingly not been overlooked by the government leaders who, according to Krieger, “are aware of those limitations but don’t have the time to build an indigenous system from scratch” because of urgent needs. But what needs to be taken into consideration is that, according to Choist, any assessment of conflict involving ethnic identity will require delicate treatment of language [9].

### 3. Language: A powerful tool

The topic of language has come back with a vengeance with globalization. Language, that “ultimate measure of human society” (Fisher 1999, p. 203 as cited in Chroist, [9] ), is according to John Stuart Mill ‘the light of the mind.’ It is the light that allows one to navigate and identify with all that a culture incorporates and entails and the main ingredient to truly being multicultural [2]. Language is a vital tool, the means of communicating thoughts and ideas, feelings, relationships, friendships, cultural ties, and through which emotions are shaped and perceptions of reality are determined [18].

Words in a language are ‘microcosms of human consciousness’ [36]. And language “is not a neutral medium that passes freely and easily into the private property of the speaker’s intentions; it is populated—overpopulated—with the intentions of other” [7] and represents a fundamental expression of social identity as Sapir explains. It can also be a “powerful means of social control” [32], employed as a mechanisms of political and social control [33]. A common language, to Sapir [18], serves as a powerful symbol of the social solidarity of those who speak it and is therefore one of the strongest unifying factors of any country, coming next to religion and race. And even though, within that one language or culture, many different worlds exist, from ethnicities to language variations to loyalties, each with their own version of reality, when the need comes, according to Maalouf [22], these differences tend to dissipate, are disregarded, and one tends to identify with the greater whole, that of language, religion or race. The United Nations has reaffirmed such beliefs and recognizes that culture is the ideological battleground of the modern world system and language is at the core of this battleground [35].

In terms of students and school curriculum, empirical research shows that in general, students perform better and are more academically and socially successful when their language and culture are recognized and used as a fundamental source of information in the school curriculum. Students may feel that whatever is not valued by school is not worth learning [6], [8] and [25]. Seeing oneself portrayed and recognized, gives the student a sense of belonging and pride which in turn can motivate students to learn and become or feel successful. [12], [15], [25], [31].

Evidently language remains an important ingredient in any discussion on culture and cultural

identity. It still is and always was, a big deal in curriculum development and curriculum policy and according to Phillipson, it remains one of the most salient issues “in many of the major ethnic upheavals of recent decades that...must become a central concern to sociology and political science” [9].

### 4. Mobilizing Arabic: Voices from within

Whereas “in some contexts there is a growing acceptance of the fluidity, plurality, and hybridity of identities, in other contexts, there are efforts to preserve the purity, unity, and coherence of identities that are perceived to be under threat” [34]. The latter is evident in the Middle East. Many are beginning to voice concerns about preserving Arabic and Arabic culture and identity in light of all the changes occurring. The question “How far should the requirement for native Arabic speakers to pursue their...studies in the language be seen as an inevitable response to market needs, and how far a symptom of neo-colonist power politics in which Arabic is relegated as non-useful, and Arab culture is cast as ‘other’ [11] is now being asked.

Language and cultural concerns are surfacing with a rising tide of feelings of marginalization, sidelining, and even loss of Arabic language and cultural identity. English may have become “one of the few enduring facts of global modern life [13], but unlike many other languages, Arabic is not just a language of communication, it is the basis of the religion which is pivotal to a whole way of life and not just the culture and cultural identities of its members. For these countries, the issue of language goes hand in hand with religion, an issue for many in these areas that is not to be meddled with. Arabic is the language of the Quran, the Holy book of Muslims, and Islam is not just a religion that can be easily separated from the state and the decisions of the state, it is a way of life that encompasses everything. And any sidelining of Arabic can have serious consequences and implications.

The issue of language and identity in the social and academic context of many of these Arab countries, is heightened due to a number of factors. Statistics show that even though Arabic is among the most widely spoken languages in the world, coming in 6<sup>th</sup> place, with a population of 256,000,000 (Source: Global Language Monitor, it is not one of the top ten languages used on the web (Source: Global Language Monitor. And, according to King [17], a cultural system, which is the outcome of the

political and economic system, is most obviously, and importantly, represented by language. Samuel Huntington's prediction of the 'Clash of Civilizations' has also had its impact on Arabic because of it carrying linguist as well as religious implications, and have created a scenario in which the Arabic language is now co notated with terrorism and leading to a repression of the language and to those who associate with it.

Another important factor is that the demographic makeup of many of these Arab countries is overwhelmingly made up of non-Arabic speakers. Therefore, as it stands now, not only is Arabic and its culture being demonized by powerful political media, they are, as shown by Kreieger [20], being dominated by more powerful languages and cultures in their own native countries. He explains that in some places in the Arab Gulf, there is a "massive expatriate community, which accounts for 90 percent of the country's population" with "Education Mall[s]" that offers "a hodgepodge of services under the broad rubric of "knowledge". He further explains in his article titled "Desert bloom", that whereas "the native populations...tend to be relatively conservative" the governments have been happy to afford great social liberties to foreigners, with hardly any legal restrictions on dress, alcohol, or gender roles."

Many, like Maalouf are now stating that if governments, such as those in the Middle East, "relaxed [their] vigilance and just let market forces and the power of numbers have it all their own way, the national language would soon be used for domestic purposes only. Its territory would shrink, and...would end up as a mere local dialect [22]". He maintains that "Any attempt to separate language from identity" is "neither possible nor desirable" because "Language is bound to remain the mainspring of cultural identity". Al Tayer, Chairman of National Human Resource Authority in the UAE, sees that "It is not acceptable to drop Arabic language from our lives" [3]. He explains that there is "no reason to permit" even "businesses like real estate developers and banks to sign contracts and serve notices in English only, ignoring Arabic completely" because "From a practical point of view Arabic must be used because it is the language of the land and the society..." Shaheen [26] reports that "The Federal National Council took a step further into the debate over English versus Arabic in schools..., urging federal universities to accept more students who do not speak English and to consider teaching some subjects in Arabic". There is a need to develop "a unified educational policy that stresses the national

religious and cultural values...to develop a young generation that is proud of its national identity" One way to do so is to "...improve[e] Arabic language classes and how they are taught... [and] re-examin[e] the policies of federal universities regarding English-language admissions requirements and teaching subjects in English." Shaheen [26] reports Dr. Abdul Rahim al Shaheen as saying that "teach[ing] courses in English [is] technically a violation of the law...General education law [in the Arab world] says the language of instruction in schools is Arabic."

According to Al Kitbi, "The decision to change the language of instruction in the social sciences and humanities to English... has profound implications for education" [1]. She believes that "the increasing reliance on English is an example of the sort of proposed changes in educational systems that serve foreign interests more than they serve the societies of the Gulf. The insistence of foreign powers on a change in the educational philosophy in the Arab Gulf region comes within the context of the control and suppression...of youth so that their world view in the future will be compatible with and serve the interests of those powers". She believes that it is now "appropriate to question whether the language of instruction ought to be English" and "to consider what are the barriers to providing a quality education in Arabic."

In the many western institutions with their English speaking faculty and staff being imported, where Western-educated expatriate professors outnumber those of the nationals, "Arabic has been all but eliminated as the language of instruction in favor of the more universal English" [24]. And the entire university system, from classroom instruction to institutional accreditation, is being overhauled to conform to American standards." Mills explains that in some law schools "the study of Shariah Islamic law and jurisprudence" which once played a significant role in the curriculum" has been significantly curtailed.

Marginalization of Arabic and its culture is beginning to be evident. Those who are affiliated with the Arabic language and culture feel they are being "erased." Mills [24] quotes one Emirati professor as saying that it has to do with "culture...you can't outsource identity". Mills also stated "that is a curial point in a country that appears to be in the throes of a national identity crisis". He quotes another professor who says "We knew our culture and our values...Now we don't even know our neighbors." There is a feeling of being "lost".



The emerging cultural context in these countries seems rather bleak. As Maalouf explains, “The present format, rather than leading to a great enrichment, a multiplication of means of expression and the diversification of opinion” instead has led to “impoverishment” and will ultimately lead to “mawkish “wallpaper”, and the extraordinary effervescence of ideas will produce only a simplistic conformism, an intellectual lowest common denominator” [22].

## 5. Contribution to Knowledge

The Arab world is experiencing a great deal of change, progress and development due to globalization and modernization. Education, in light of globalization and the introduction of the English language, is undergoing major changes. Yet, not much is written or known about it. This paper sheds some light on this area and presents some of the concerns that many of these countries are voicing due to these changes and gives some of the reasons behind such concerns.

## 6. Conclusion

Globalization demands some degree of structural change in the various dimensions of a society which, according to Shorish [27], are expected to affect the normative and values systems of developing countries in a most dramatic way. For the Arab world, one such “change” is seemingly a loss of ethnic identity and culture that that is accompanied with and a great deal of concern, debate and controversy. Such change may lead to, according to Maalouf [22] an “unleash[ing] of millions upon millions of our fellow human beings a reaction of furious, suicidal, systematic rejection” if all individuals in this globalized world do not find their own spaces, where they can recognize and identify with their worlds and not “be made to think it is irremediably alien and therefore hostile to him.

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# Report on Issue Related to Teaching: Story Telling and Cultural Literacy

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## Abstract

*This paper draws on theory and educational policy about creativity and literacy; it includes an analysis of short stories composed orally by boys and girls aged 8-11 years. Data was collected during two small scale pilot projects conducted in British Primary Schools, one in the North of England and one on a Hebridean island off the coast of Scotland. An exploration of literacy, which relates here to the pupils' treatment of character, setting, theme, style and structure, will help to develop an understanding of their ability to access the imagination, express original ideas and compose a coherent, whole text. The discussion will explore how story telling may enhance children's sense of identity, citizenship and cultural literacy and also points to some routes for practical implementation of creative teaching and learning.*

## 1. Introduction

Teaching children the art of story telling is important. Being able to tell a story helps to establish a sense of identity, develop human relationships and understand our place in the world. Story telling is self-affirming [1]. It is an empowering, sometimes subversive, political act [3]. It is also a hopeful activity [4]. Learning the art of story telling is part of growing up; it enhances social and cultural understanding [11]. Enculturation and socialisation are essential if we are to take an active role within our particular contexts but also, as global citizens, an understanding of what it means to be able to tell a story is an enlightening and emancipatory experience. Perhaps, most importantly, giving children the opportunity to engage with stories and to become story tellers themselves is a joyful project.

Until children learn to play with language, they cannot understand its systems of meaning. It is also necessary to equip children with the foundational knowledge, skills and understanding they need in order to produce good work. Creativity involves the process of drawing on prior knowledge, making connections and making something new from those connections [6]. As the Primary curriculums in England [8] and Scotland [10] focus more on

creativity, engagement and enjoyment, teachers can begin to address their concerns about the suppression of the imagination and stifling of creativity due to previous impositions such as the National Literacy Strategy (NLS). As a result of the NLS, which affected schools in England from the turn of the century, teachers have been concerned that the fragmentation of texts and compartmentalisation of 'English' has affected pupils' sustained engagement with and enjoyment of reading and writing. Therefore, one purpose of the pilot study was to evaluate children's ability to develop a sense of structure in a 'whole' text. Emerging patterns which might suggest gender differences in the Primary stage were also explored as in a previous story telling project with older pupils [5].

## 2. Research Objectives and Theoretical Foundations

The objective here was to consider how we might equip pupils with the knowledge and skills needed to create well structured narratives which take account of place, person and the reader through planning, composition and reflection. The study was informed by an eclectic consideration of narratology drawing on the work of both structuralist and post-structuralist theorists, in particular Propp [9] and Bakhtin [2]. Bakhtinian theory offers a post-structuralist view wherein a dynamic, triadic system of meaning-making is formed through the dialogical relationships between author, narrator and reader. Whereas language is contextual and reflective of social forces, literary text can transcend and subvert, consciously disrupt authority and thus become a liberatory force. Bakhtin also offers the reader an inroad to space / time indicators ('chronotopes') pertinent to many of the adventure stories produced by the participants of this study. His explanation of the 'road' and 'encounter' [2] would seem to be more closely aligned to Propp's formal method of structural analysis. Propp's simplified model, drawn from a wide range of stories such as fairy tales, myths, legends and epics, describes highly specific and defined roles, functions and 'spheres of action' within plot will also be useful here [9].

An analysis which focuses on *how* a text is written can lead to an understanding of *what* it says. Working out the effect of writers' choices enables a reader to create meaning. Narrative theory can be adapted in order to enable pupils to understand the codes and organising principles of plot and consequently to compose their own stories.

For the purposes of this research project story telling was employed as a medium within which children's creative and cultural literacy can be explored. This article, therefore, is an examination and evaluation of Primary school pupils' stories and may consequently inform practice in the classroom. The participants were encouraged to plan and revise their work, thus critical literacy was also part of the project. The study aimed to address the following questions:

- When children are invited to tell a story, what do their stories consist of in terms of theme and how are they structured as regards development of plot, character and a sense of place?
- How can teachers equip pupils with the knowledge and skills which will help them to create well structured narratives that take account of place, person, plot and consequently the reader through planning, composition, reflection and editing?

### 3. Method: Data Collection

In school A (North of England) 24 pupils took part aged 8 – 9 years; 12 girls and 12 boys were randomly selected from three junior classes. In School B (Hebrides, Scotland) 10 children took part, 7 girls and 3 boys (the entire junior class) aged between 8 and 11 years. The work was carried out on a one to one basis with the participants in order to gain initially an individualistic insight rather than one which is influenced by immediate classroom relationships and peer pressure. Brief oral interviews were conducted with the pupils prior to, during and after the composition exercise to establish how the pupils were structuring their ideas. The intention was to explore the pupils' development of plot, sense of place and person and to consider the planning, drafting and editing processes employed by the pupils. The advantages of talk for textual development have long been acknowledged; recent research which examined the benefits of 'oral rehearsal' for composition and reflection found that there was increase in confidence, enthusiasm and therefore performance for younger pupils. Despite theory and policy directives, however, this study also found that teachers did not fully understand what 'oral rehearsal' was and how it could be implemented in the classroom [7].

In each case, after the planning stage, I acted as scribe writing down exactly what the participants told me. At the end of the composition stage the

whole text was read though again and changes were made according to the pupils' directions. Along with the planning sheet, the second draft would enable further analysis of the children's editing processes. The introduction of the 'scribe' element facilitates an investigation of literacy as it relates to oral composition rather than transcription, which consists of technical accuracy such as grammar, spelling and handwriting. Whilst current external assessments (such as SATS) are often focused on these latter surface attainments at Key Stage 2, the aim here was to investigate the pupils' engagement with thematic content, setting, character, and their ability to organise ideas as well as express their imaginations in an immediate and observable way. There was some minimal intervention as regards paragraphing (new place, new person, new action), sentencing (use of commas and full-stops to reduce the use of 'and', 'then'), and intermittent prompts to use names in order to reduce sentences beginning with 'he / she'. Occasional prompts were also needed for moving on through the plot when participants began to get caught up in dialogue which was not contributing to development of the story.

In both schools each pupil chose one object from a collection arranged on the desk. Some of the objects were natural, for example, a piece of bark, a shell, a stone from the beach, a feather. There were other objects which were non gender specific but imaginatively evocative such as a small wooden box with silver moons and stars on it, a bandage, an old door knob. After they had chosen their object, I gave the pupils a planning sheet which consisted of a number of circles in which they could write. The pupils were asked to make brief notes about the setting for their story (time and place), a description of their object and include some words to introduce at least one character. They were also encouraged to outline a very simple structure in terms of action regarding what happens at the beginning, middle and end of their story. Children whose writing skills were undeveloped communicated their ideas orally at this stage.

After the short planning process the children were invited to begin telling me their stories which I simultaneously wrote onto a laptop; in this way the pupils were able to see their texts develop on the screen as they composed them orally. When their composition was finished we read the stories together and discussed any changes they would like to make. The pupils usually spent another five to ten minutes editing and producing their finished version. In each case the process took between 20 to 30 minutes.

### 4. Outcomes

The discussion below offers an indication of areas of interest revealed by the findings. The

analysis of data collected from both schools focuses on content / themes, complexity, style and structure and explores evidence of any developed sense of place and person. Propp's list of folktale archetypes (or 'actants' within his 'dramatis personae') offers a useful way into reading, writing and analysing stories [9]. It is interesting to see the extent to which these figures, themes and their consequent functions appear in the pupils' stories. The hero, the villain, the helper, leaving and returning home, losing and finding objects, the gift and use of magic objects, transportation and pursuit; recognisable characters, themes and plot lines emerged in the stories from both cohorts. This seems to indicate that the pupils were able to draw on their experiences of narrative (text or film) and assimilate recognisable features and elements within their own compositions. The main focus of this evaluation is a consideration of the extent to which this prior knowledge is successfully applied within a coherent and satisfying narrative structure. The relationship between structure and meaning is a central concern here.

#### 4.1. Theme

The object element resulted in many stories having a supernatural theme. The word "magic" appeared in five of the boys' titles and four of the girls'. In general both boys and girls invested their objects with some sort of power. *Good luck* and *bad luck* were equally popular themes among both boys and girls. There were nine adventures across space and time. Four of the boys wrote about *transportation*; five of the girls were taken to another world, place or time through the power of their object. The theme of *lost and found* was also popular, three boys and four girls included this element. Two boys composed stories about ghosts. More boys wrote about danger and scary creatures; more girls wrote about family and friends. Most of the stories were original with only two boys and one girl drawing on Arthurian legend. One boy and one girl included glimpses of plot lines which were recognisable from film but these elements did not dominate their stories.

#### 4.2. Character

As expected, most girls wrote about young female characters and most boys wrote about young male characters. Only one of the boys introduced a female character, a grandmother, whereas nine of the girls wrote about a range of male characters including a magician, a clown, a king, an explorer. Four of the male figures were brothers to the female protagonists. In these stories one of the common themes was a co-operative struggle to overcome difficulties. Two of the boys' stories included other male friends but the majority centred around one

male character, always the age of the author and often an active, solitary hero.

#### 4.3. Structure

Overall, the girls' stories were longer and more complex in terms of plot; the average length for the girls' stories was 473 words compared with 322 for the boys. The longest story by a girl was 926 words; the longest story by a boy was 611. Most boys and girls managed to structure their stories within a simple beginning, middle and end framework. One clear difference is that, whilst both boys and girls introduce problems in their stories, more girls were concerned to create and work out resolutions, or cliff-hangers which suggested possible sequels. Conversely, many of the boys were satisfied with offering very brief endings which did not attempt to tie up loose ends.

In these Primary projects, both girls and boys offered more humour regarding action or character in their stories than in the Secondary School stories collected and analysed elsewhere [5]. There was also evidence of more flair in terms of structure (effective use of repetition, circularity and neat denouement). This latter skill was more evident among the girls but a third of the boys managed to 'entertain' in an interesting and original style. More girls than boys managed to include dialogue effectively within their stories. The girls were, overall, more meticulous editors, in some cases spending up to fifteen minutes revising their texts. The most notable difference between the boys' and girls' compositions was the development of character (a clear sense of person) and the ability to create a sense of place by offering a detailed description of setting. In both instances girls outperform boys.

From these small samples I have identified some similarities and differences between the boys' and the girls' compositions regarding theme, character, setting and structural devices which correlate to the findings in a previous pilot project and may inform future pedagogical intervention, as suggested elsewhere, in order to encourage boys' sustained engagement with whole text [5].

### 5. Analysis of Findings

Only two pupils from these cohorts managed to move beyond narrative structure at its simplest level (beginning, middle and end) and compose stories which demonstrated a sophisticated understanding of narratorial elements such as *Conflict* (which exists outside of the plot), *Crisis* (which brings the conflict into the narrative framework), *Climax* (a turning point) and *Resolution*.

### 5.1. “Overcoming Fears”

This story was written by a girl (aged 9). It includes relatively complex character development which is linked to dealing with an ongoing problem of bullying at school. The main protagonists of this story are twins, a boy and a girl. This is a long and adventurous story (926 words) with many twists and turns. A developed sense of place and person is evident and the action is set within a clear narrative structure as regards conflict, crisis, climax and resolution. The story opens with the following context: the twins are grounded because they stayed out too late, father has not returned after searching for them, so they go into the attic because they are bored. They can't resist opening a magical chest with stars and moons on the lid:

“When they open the chest, they grow cold and see a silver, sparkling mist all around them ... a kind voice comes out saying, ‘I am spirit and will help you overcome your fears.’ They find themselves saying that they had a dream about their spirit and knew that they would overcome their fear by going through an adventure.

The spirit says that their dream is true and asks them if they would like to go on an adventure. They agree to this at once because Daphne does not want to be called a wuss [slang for weakling] any longer at school and John does not want to be called a wuss at school as well. They had been bullied because last year they had been to a birthday party at a theme park and the birthday boy's mum had wanted them all to go on a spooky ride. After the ride, all the guests found out that Daphne and John did not go on the ride because they were too scared.”

The children therefore revisit the source of their problem through the structural devices of conflict (bullying) and crisis (a mystical encounter with a ‘helper’). The adventure continues and the children are transported through place and time. They get into a boat, travel through a passage way and emerge from a cave “when their eyes clear they find themselves in the same sort of spooky ride which was at the theme park.” The difference here, however, is that “the monsters are real.” The spirit guide gives the children tools and advice:

“As soon as they see that the monsters are real, a sword appears in both of the children's hands. The spirit tells them to use the swords not as weapons but as tools to overcome their fear. The swords give them encouragement to overcome their fear so they go on through the tunnel fighting their way to the end until they find a fearsome monster blocking the exit. The spirit tells them that this monster is the most fierce ever to be known in the universe ... The spirit says that that they must defeat it to overcome their fear.”

The children learn that the way to defeat their fears is to believe their spirit will help. The climax

pivots on the helper's gifts of encouragement and faith:

“After a few minutes of believing, the monsters disappear and they find themselves in a land so peaceful that they can go to sleep. When they wake up they find five ladies dressed in gold bringing them food and drink. Then, the spirit comes forward and congratulates them for overcoming their fear. They ask when they can go home, as soon as they finish that question they find themselves in the attic with their father beside them. When they look at the clock, it is still 11-30am and their Dad tells them that he had only been at Grandma's because he had been too tired to come home after searching for them.”

At the end of the story the children are no longer grounded so they go to the theme park knowing that “their friends will see that they are not scared anymore.” This story offers a two-fold resolution; within the original framework of the plot their father returns but, more importantly, beyond the plot, the outcome of their adventure means that the children are no longer afraid and therefore will not be bullied. The well structured, emancipatory movement from victim to victor creates an effective sense of character development and addresses an important and problematic issue for school children.

### 5.2 “Gavin the Troll”

Perhaps the most satisfying story in terms of structural development and resolution was told by a boy aged 9 at the time of the Hebridean project. In this precise and economical tale (376 words) the main character is described in the first paragraph as having “a nice personality”. He is transported by means of a rusty old doorknob to “a magic land”. The protagonist who “never, ever fights” because he is “a nice little troll”, is “puzzled” and “confused” when he discovers that the creatures in the magic land are at war. He makes an excellent suggestion:

“Grant says, “Why can't all of you just share the land?”

The magical creatures stopped and thought.

“So, what are we going to do instead of fighting, then?”

Grant says, “How about a party?”

“Yeah a party!” Shout all the magical creatures waving their weapons in the air.”

The narrator's reward for solving the conflict is that he gets home safely; hence we have a double resolution.

Here is a glimpse of that hopeful endeavour which fiction allows. The freedom of creative engagement with story empowers the author in his imaginative state to question, revolt and resist, to imagine peace and reach a joyful resolution. From the mouth of a nine year old boy a character is created who can take control of his circumstances and help to readjust a world spoiled by war. Moving

beyond the localised social context of the real and present dangers of bullying in the school playground, the narrative here touches on a more transcendent and enlightened notion of what it may mean to be a global citizen. In this boy's utopian vision moral decisions are made and heroes returned to their homes in time for bed.

## 6. Conclusion

Problem solving is an essential life skill which can be explored and learnt through story telling. Conflict, Crisis and Resolution are structural narrative elements through which a character must negotiate a pathway. Imagining how a character might solve a problem in a story is a useful and valuable skill for all children and one which can be introduced in a creative and engaging curriculum. As regards planning and editing, helping pupils to evaluate what is not worthwhile by enabling them to develop their criticality is also part of the creative process. If children are critically aware of what is valuable and what is not valuable, they will be able to express themselves more effectively.

The methods employed during the story telling projects described above resemble the suggestions outlined in a recent initiative 'Every Child a Writer' (2009) piloted in some local education authorities in England. There has been a long history of children meeting expectations in their writing at Key Stage (KS)1 but failing to make sufficient progress to reach the expected grade at KS2. This is particularly the case for boys. Involving teaching support assistants and literacy co-ordinators in effective practice in the classroom would allow a replication of close, one-to-one work with pupils. Larger scale, follow up research might also examine and evaluate how the Primary Framework and the range of writing-related materials and interventions available for Years 3 and 4 are implemented in schools and whether, and to what extent, their use ensures effective progress in writing for all pupils at the beginning of KS2.

We may find that the issues described above are not merely 'British' and discover similar phenomena in other countries. Emerging trends could lead to a more wide spread evaluation of the impact of similar interventions and an assessment of how their implementation may affect the confidence and skills of both teachers and pupils. This might include an exploration of which interventions or combinations of interventions school staff, parents and children perceive to be most successful and what challenges may arise regarding their implementation.

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# Follow-up and Feedback in Professional Development

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## Abstract

*The importance of transferring learning from a professional development programme is widely acknowledged. The problem lies in overcoming the mitigating factors and promoting the enabling factors that ensure transfer of learning in the classrooms. When transfer is successful school improvement occurs culminating in quality education for students. The findings of this study are important for planners of professional development programmes say for enhancing the computer assisted learning skills of teachers in the 21<sup>st</sup> century. A case study approach was used with data collated from documents, in-depth interviews, observations, questionnaires and focus group. The findings through inductive analysis are that intensive follow-up, feedback and feed forward are required to support teachers to transfer their learning into the classrooms.*

## 1. Introduction

Professional development enhances skills of teachers at any career stage in their professional lives. Different forms of professional development programs exist such as workshop based which may be of short duration or longer term professional development activity. This paper elaborates the results of a professional development activity that supports the theory that follow-up and feedback leads to transfer of learning in the school classrooms in two provinces of Sindh. The study suggests that additional feedforward cements the transfer of learning ensuring sustainability.

## 2. Problem Statement

The lack of transfer of learning in the classrooms is of concern to organizers of professional development programs. The teachers who undergo professional development activity often do not apply their learning in their classrooms after the completion of the programme. Thus the problem statement is what are the enabling factors that promote teachers transfer of learning into the

classroom from professional development programmes.

## 3. Research Rationale

A research into the impact of a professional development activity from 2004 and 2007 in two districts of Sindh Province led to the results that form the genesis of this paper. Although, the professional development was in four Sindh districts for government primary school teachers in pedagogical skills and content enhancement in science, mathematics, social studies and the languages, this study reports the findings in reference to two districts.

The study is important because the quality of education in Pakistan needs improvement [1]. Quality teachers need quality educational leaders who are well equipped to bring positive change within the school system [2]. Therefore, this study is significant as its findings may provide alternative structures and strategies towards improving the quality of professional development programmes within the Pakistani context.

This research is also significant as it seeks to contribute to the body of knowledge in educational research related to the impact of teacher education programmes in developing countries especially in Pakistan. The results can also be compared to similar research in other developing as well as developed countries. The study will also inform future educators, researchers, and educational authorities about the benefits of follow-on support after professional development programmes for teachers in Pakistan.

## 4. Background

Beginning with the background of the study, a perceived lack in the quality of education in Pakistan [3], in the primary sector of education [4], [5],[6] led to education reforms programs [8] part of which required training of teachers. Research [7], [8], [9] states that quality of education improves with training of teachers by updating their knowledge and skills development.



Professional development authors acknowledge that the success and sustainability of a professional development program is dependent on the effectiveness in changing the mind-sets of teachers who are reluctant to change their ingrained teaching practices and beliefs [10], [11], [12], [13].

The UEI-PDP was a consortium of government, non-government and private educational institutes that came together to enhance the pedagogical skills and content knowledge of teachers, head teachers in the four districts of Sindh province, Pakistan. The PDP comprised of pedagogical enhancement at the training centres (TC) followed by a short field work, return to TC for content enhancement then an intensive follow-up. Thus total duration was eighteen weeks of PD.

## 5. Methodology

The study adopts the epistemological framework of constructivism as the most appropriate to understand the meanings that are associated with the United Education Initiative-Professional development Programme (UEI-PDP) by the participating teachers, head teachers and master trainers. The shared perspectives include the UEI-PDP which brought the participants together. Focusing on the meaning and understanding from the participants' perspective is intended to give a rich description of the impact of UEI's PDP in shaping the teachers and head teachers as change agents in the learning and teaching environment in primary schools in Sindh Province, Pakistan. Equally important are the changes brought about by the UEI-PDP in the professional and personal lives of the teachers, head teachers and master trainers. How the change was achieved is an important contribution of this paper.

This study draws upon theoretical concepts of structural functionalism and symbolic interactionism. In the school system there is the external administrative machinery of the District Education Authority (DEA) and the internal administrative machinery of the school system which are interdependent for smooth functioning. The research revealed that in the context of the UEI-PDP, in some districts the administrative machinery were coordinated and aligned with the same values and in others the linkages were weak. In some schools, the head teachers (HTs) and primary school teachers (PSTs) worked collaboratively to achieve their own goals which were aligned with those of the UEI-PDP while in others the HTs and PSTs were discouraged by the administrative machinery to implement their learning.

According to symbolic interactionism, the social life of the human beings is formed, maintained or changed through mutual interaction and communication [14]. This attribution of meaning to

situations through symbols is a continuous process taking place in a social context, which, in this study was the school learning environment and the interaction of people (HTs, PSTs and SSTs) herein as well as at the Training Centre the interaction of the MTs and PSTs.

The research methodology defines the activity of the research, how the research proceeds and how progress is measured. A multi-site case study approach was adopted as the methodology for this research. In this multi site case study, the research strategy focused on the impact of UEI-PDP on the lives of the participants who experienced the intervention. The study included analysis of documents and considered the perceptions of primary school teachers, head teachers and programme managers of the UEI-PDP in Sindh.

The approach of a multisite site case study was used with each site treated as a single case and the individual conclusions used as information to contribute to the whole study that was the UEI-PDP. The questionnaire method was selected because a majority of the participants in the study were scattered in different talukas (administrative divisions) in the district of Sindh. The 130 questionnaires were sent to 30 head teachers, 60 teachers, 20 master trainers (MTs), 11 members of the school support team (SSTs), 2 (assistant district education officers (ADEOs) and 4 supervisors comprised this study. As all the participants were based in schools, consent was requested from the participants by the semi-structured questionnaire. A letter was included with the questionnaire indicating the purpose of the research and the nature of their involvement in the research. The questionnaires were used to identify 6 schools whose teachers and head teachers were interviewed and observed and also led to identifying focus group participants.

In the first phase, the researcher began data collection by first contacting, MTs, SSTs and each head teacher of the school who could be under consideration for the study. The contact information was available from a data base maintained at UEI Office. The questionnaires were sent directly to the MTs, SSTs and the head teachers to distribute to two teachers in their schools. The deadline was given to ensure that the participants completed the questionnaires in time to give the researcher ample time to collate and analyse the data. Permission was sought from the head teachers of the schools to interview the teachers as well as observe the classrooms during the teaching learning process.

The second phase of the study included interviews and observations and also identification of schools with a unique situation. Apart from the PSTs and HTs of schools, the SSTs, MTs and ADEOs were also interviewed to get a deeper understanding of support services provided in the teaching learning environment. According to Robson [15] the

limitations of validity and reliability in case studies can be reduced by triangulation using different tools for collecting data such as documents, interviews and observations. This triangulation contributed to the validity and reliability of the study.

The third phase of the study ensured further triangulation of the data through two focus group interviews, one in each district. The individual interviews and focus group interviews were recorded and transcribed. It was the intention of the research that participants whose responses in the individual interviews revealed information pertinent to the research question would be invited to the focus group interviews.

## 6. Results

Merriam states that the qualitative approach of data analysis is highly intuitive as quite often it is difficult for researchers to state precisely how they arrived at their theory building or arrived at their conclusion from the information collected [16]. However, according to Miles and Huberman, good data management, careful processing and analysis of the data can ensure that the researcher discovers emerging themes in the context of the research [17].

### 6.1. Document analyses

The UEI-PDP documents were analysed using an inductive approach that included overlapping analysis with data collection [18]. Initial data collection and analysis began with the information deciphered from the documents maintained at the UEI office. Some of the documents were in hard copies and soft copies of other documents such as reports were also available. The confidentiality of the participants in this study is maintained by using their position rather than their names (that is whether the reports were made by program managers, MTs, SSTs or the M&E officers).

The United Education Initiative (UEI) was a product of the government's initiative to encourage public-private partnership where five organizations pooled their resources together. UEI believed in improving the quality of education for the masses through a partnership with other educational organizations; by setting up viable institutional structures that focused on planning, implementing and assessing educational activities. Education sector reform assistance was the agency that delegated the implementation of the teacher training component to the UEI consortium [19]. This was as a part of school enhancement program that also included the training of teachers, head teachers and educational administrators in addition to other objectives [7].

The documents were analysed for the participants' perceptions to the relevance of professional development curriculum, whether a

change had occurred in their attitude and the enabling and mitigating factors to the implementation of their learning in their classrooms and schools.

#### 6.1.2 Curriculum relevance

The focus of the study was on two of the modules as these modules were believed to be innovative experiences for the teachers. The modules are 'Reflective practice' and 'Mentoring and peer coaching'. The impact of these modules was studied through the questionnaire which was distributed to the participants. Documentary evidence of the MTs and course participants (CPs) perceptions of the modules were:

- *MTs*: The methods used to teach the concepts in the module were activity based according to the MTs. They used the lecture method with additional questions to involve the participants, think-pair-share, jigsaw strategies, cooperative learning strategies, silent reading, reading aloud and role plays.
- *PST-CPs*: "Teaching our students in the classroom was made easier with the methods that were used. We were always actively involved in learning and keen to know what new concept we would learn next."
- *MTs*: Simplified terms and activities to make it according to the context of the teachers in the initial stages of the training. The modules of Reflective practice and Mentoring and peer coaching were affirmed to be an interesting concept and relevant for the PDP.
- *PST-CPs*: Stated examples of now reflecting and sharing with their peers their problems encountered while teaching, which they were reluctant to do before the completion of the module at the training centre. Before the training, the CPs seated the slow learners at the back of the classroom but now they paired the students and students in need are seated so that they can easily approach and be approached by the class teachers.
- *MTs*: The head teachers were also trained on the importance of embedding the reflective practice into their daily work routine. The MTs demonstrated the importance of working in a collegial atmosphere, the advantages of holding frequent meetings and taking the teachers of their school into their confidence. *HTs-CPs*: Prior to the training program the belief of the head teachers was that if they consulted with their teachers it would imply that the head teachers did not know how to perform their duties. Another important exposure during the UEI-PDP was the important role of the community in improving the teaching learning process in the school.
- *SSTs*: Learnt how to mentor and support teachers in a friendly manner and not like an inspector that

was the earlier practice. They were particularly satisfied with the modules of reflective practice, mentoring and peer coaching and teaching through media which they found new in regard to their earlier educational experience.

- *PSTs-CPs*: In the first field work the SSTs would guide us on how to incorporate different activities when preparing a lesson. “When we returned to the training centre then we would discuss with the MT what we had tried out and the difficulties experienced.” During the second field work phase the SSTs visits in the schools and discussions helped us to clarify our understanding of how to use different teaching methods with different subjects and prepare relevant teaching aids using low cost materials.

**6.1.1. Change in attitudes.** Documents indicated that during the course of the UEI-PDP there was an observable change in attitude of the PSTs and HTs in the following context where at the beginning of the training the CPs did not:

- come on time to the TC but now arrived on time
- participate actively during the training session but now participate actively
- share their thoughts but now share ideas without hesitation
- volunteer to come to the front and present but now they do

**6.1.2. Enabling and mitigating factors.**

According to the documents the enabling factors in transferring the learning for each of the different categories of participants varied. For the MTs, it was being able to change the attitude of the CPs to the UEI-PDP by making the sessions interactive and interesting as well as involving the CPs in critical reflections where they discussed their earlier knowledge and practices and compared them with what they had now learnt. Feedback from SSTs and PSTs on difficulties experienced in the field enabled the MTs to give a feed forward.

For the CPs, the enabling factors that helped them to transfer their learning into the classrooms were the meetings with SSTs and MTs. These meetings and dialogue helped to clarify their understanding of how they were to implement student-centred learning in the classrooms and eased the initial adaptation issues like a teachers’ stated concern of whether “I would be able to do it?” Other enabling factors for the CPs were:

“Discussing with head or colleagues when we have an issue”

“Students are enjoying activities; we want to use what we learnt”

“Students attendance is improving, and teachers are working together so we are enjoying teaching.”

“Follow up given by SSTs.” Meetings with SSTs & MTs

The SSTs stated that “The follow-up helped us to show teachers how to organise group work and make low cost teaching aids”

A mitigating factor according to the SSTs, as stated by their CPs, were the number of students in the classroom which made provision of resources for the students difficult and this was because most of the students could not afford to purchase resources such as charts, colours and so on. The large number of students in the class with unmovable furniture also challenged the organisation of group work. The visits by supervisors who were not involved in the training and did not appreciate the advantages of student-centred teaching who as per their traditional beliefs that a quiet class meant the students were studying and if the notebooks were filled then that implied the students had learnt and understood the topic.

**6.2. Interviews and observations**

Data was collated from interviews and observations to triangulate the findings from document analyses.

**6.2.1. Curriculum relevance and change in attitudes.**

All the interviewees were adamant that the PSTs and HTs behaviour and attitude had changed for the positive during the course of the program but they had their doubts on the sustainability of the change after the completion of the program. The MTs, SSTs and program managers expressed their concern as the issue of ownership of the UEI-PDP by the DEO. This concern was rightly expressed as visits to the schools where the ADEO had their office (schools UHCb & UTKb) revealed that they discouraged group work as wastage of time and emphasized on filling of the notebooks by the students as evidence of teachers having done their duty with the students. A different situation was observed in a high impact school (UHCg) where the ADEO had her office who also wanted to have the notebooks filled by the students but did not interfere in the school teachers’ instructional procedures. It can be interpreted as personal characteristics and beliefs of the DEO would affect the transfer of learning by the teachers and HTs in the schools.

The PSTs and HTs asserted and made attempts to convince the researcher that they had never before experienced any training where they were involved in group work, called forward to give presentations and guided “so positively”, always encouraged irrespective of given answers.

**6.2.2. Enabling (E) and mitigating (M) factors.**

The data collated from the in-depth interviews of the PSTs and HTs corroborate the findings from the

documents. The individual statements are followed by (E) indicating enabling factor or (M) as the mitigating factor and then the school and teacher code.

*PSTs-CPs*: “Visits by SSTs helped me to do activities with students in lessons” (E). RTGg-T1

“Do not hesitate to ask a colleague now but never before” (E). UTKb-T1

Meetings, discussions with MTs, SSTs, HTs & PSTs help” (E). RTGg-T2

“Having colleagues and a head teacher who supports is very good” (E). UHCg-T2

“Our head encourages us to use different teaching methods (E) but the supervisors think that we are wasting time by not getting students to write in their books” (M). UHMg-T2

“The supervisors need to support us. Sometimes when they visit and find us doing group work they discourage us from it saying that it is a waste of time” (M). UHMg-T1

“Need recognition from the government for our work” (M). UTKg-T2

*HTs-CPs*: “SSTs helped teachers to plan lessons with group work for students” (E). RTGg-HT

“We are trying our best (E) to do what we can in the resources that we have.” UTKg-HT

“Learnt new teaching methods, reflect and prepare action plans (E). RTGb-HT

“I have improved in my management skills and I consult my teachers frequently so that they are also involved in decisions” (E). UHCg-HT

“Working as a HT is easier now I know what to do” (E). UTGg-HT

“The DEA has to support our different ways of teaching and encourage the teachers by praising them for trying new things” (M). UHMg-HT

### 6.3. Questionnaires and Focus group

The findings from the documents, interviews and observations were corroborated with the questionnaires and focus group. The enabling and mitigating factors according to the perspectives of the PSTs, HTs, SSTs and MTs are enunciated.

#### a) Perspectives of PSTs

##### *Enabling factors:*

The follow-up by the SSTs was stated to be one of the determinant factors that helped to make the PSTs put the theory learnt at the TC into practice. As stated by a PST, “Teaching has become easier and I enjoy it now.”

##### *Mitigating factors:*

Two PSTs stated that the ADEOs need to provide more support to facilitate the teachers and not to ‘discourage’ the teacher from organising group work. The same comment was made by a number of the PSTs in their questionnaire while some abstained

from answering the associated questions. This implies that the PSTs were not satisfied with the support of the program by the ADEOs and the supervisor but did not want to comment, which could be linked to uncertainty of retribution. Some relevant written statements in the questionnaires were: ‘the education system can improve if the District Education Department provides support,’ ‘support should be in form of verbal encouragement,’ ‘provide teaching aids,’ ‘not to involve teachers in non-academic work,’ and ‘when we are asked about what we are doing with the students in the classrooms we are motivated.’

There should be some reward and consequence mechanism to motivate teachers to apply their learning. A number of PSTs stated that they were demotivated when the term for their support by the SSTs was completed and wanted the support to continue instead of stopping after some months. Thus motivating factor was the continuous support provided by SSTs.

#### b) Perspectives of HTs

##### *Enabling factors:*

Follow-up - A head teacher commented, ‘I like the follow-up done by the SSTs – their coming into the schools to help the teachers brought about the change that you see’ (In-depth interview UHMg-HT, FG-H & FG-T).

Prepared and easier - “I am better prepared and can plan ahead.”

Ownership - Involving teachers in decision making gives them a feeling of ownership.

##### *Mitigating factors:*

When supervisors complain that the copies are not filled and the syllabus is not complete then it demotivates teachers from organising different activities and group work.

#### c) Perspectives of SSTs

##### *Enabling factors:* Statements by SSTs such as

“Teachers who are enthusiastic and want to try new things when they are teaching.”

“The change in the learning environment where you see students work in the classrooms and teachers making models with clay.”

“Supportive HTs who ensure that the PSTs get the materials required for learning and teaching process.”

##### *Mitigating factors:*

“When teachers tell them that the supervisors have asked them to rearrange the desks in the class into row arrangement.”

“The distances to some schools which make it difficult to provide maximum support.”

“The political influence of some teachers who do not want to change and try new things – they discourage other PSTs from applying new learning.”

#### d) Perspectives of MTs

*Enabling factors:* CPs who are keen to learn and participate actively in all teaching learning activities. “Meeting other colleagues and learning their best practices.”

*Mitigating factors:*

“When politically motivated CPs try to disrupt teaching and learning processes in the TC.”

## 7. Conclusions

The change in attitude is as a result of the teaching methods, modules and the frequent meetings between the MTs and PSTs helped to ensure that the course participants were given the opportunity to voice the difficulties faced when applying the theory learnt (at the TC) into practice when the participants were in the field. This provided an insight to the MTs on the further needs of the PSTs with regard to PD activities. Meetings between the SSTs and PSTs in the field (follow-up visits) helped the PSTs to put into practice the theory learnt and also in preparing appropriate low cost teaching aids. Reflective dialogue cleared misunderstanding or even sharpened their understandings of the pedagogy and content learned. Learning about the best practices in other districts and having a dialogue with colleagues on how they solved particular problems which were common provided the CPs with additional exposure of solving problems within a different cultural or common context. Supportive HTs who encouraged sharing of ideas and collaboration were enabling factor to transfer learning in the classroom.

Recommendations from the study are:

- (i) When planning the implementation of a PD activity, intermittent short term and long term follow-up strategies of the participants should be incorporated into the plan. Short-term strategies such as meetings with the MTs, and SSTs support in the field. However, the long-term follow-up strategies were in the jurisdiction of the DEA. This shows that the DEA and the Provincial ministry (Sindh) need to ensure that all professional development programmes, irrespective of whether the government education departments are involved directly or indirectly in its implementation or with other NGOs or donor agencies, are followed-up frequently even after the end of the contractual period.
- (ii) The amount and quality of follow-up support given to the participants by all the stakeholders results in sustainability of the changes in practice from transfer of learning through PD activities. The stakeholders in this context are the MTs, SSTs, M&Es, PM, ADEOs, supervisors, DEA. In the UEI-PDP from 2004 to 2006 the follow-up support was provided to all participants by MTs, SSTs, M&Es and PM.

(iii) The follow-up can be given by the trainers and by DEAs involved in the intervention including researchers. The importance of follow-up cannot be more emphasised than by reiterating to establish a PD forum at both the District and Taluka levels that comprise of members of the DEA, District Governance and the educated fraternity of the community with selected PSTs and HTs. This may carve the path to promote a self learning environment for the community, teachers and the education department. Such a model established during the extension phase if adopted by the Provincial Education and Literacy Department (Sindh) will provide a culture of continuous professional development similar to the school based professional development created and researched in Australia, England and United States.

Ensuring that collaborative structures are set into place, of long term, duration ensuring follow-up, feedback and feed forward will support transfer of learning from any professional development programme.

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# Discovering the Passion: Winners of Major Awards Describe Their Career Experiences

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## Abstract

*Our modern society places great emphasis on attending post-secondary institutions to pursue vocational knowledge necessary for success in the work place. Although universities have been in existence for over a thousand years, there has been very little research into the practices of the professors who teach in these institutions. This study seeks to illuminate the characteristics and practices of successful professors to benefit educators in all levels of education. Through the analysis of the careers of award winning professors, the researchers of the current study strive to 'discover the passion' required to be a successful educator. This study highlights the importance of interest, collaboration, and the balancing of an 'outside' life with career to create an educator who is able to invest tremendous amounts of time and energy into the transmission of knowledge; an act of great importance in the lives of students and teachers alike.*

## 1. Introduction

The purpose of the proposed research is to understand how successful academics at Queen's University maintain their passion for their career. Through interviewing winners of major teaching and research awards, the researchers of the current study hope to learn how these academics maintain their motivation for success. The significance of this work lies in helping discover the motivational underpinnings of successful academics, whose experiences might then prove illuminating for other professionals who would like to bring passion to their own lives with subsequent benefits to those with whom they interact, such as university students for this particular study group.

The modern university is one of the few institutions in existence today that has been established since the Medieval era. The oldest institution still in existence is claimed to be the Al-Azhar University, founded in Cairo, Egypt in 969 C.E. The oldest European institution in existence today was founded in Bologna, Italy in 1088 C.E., with Paris and Oxford not far behind. The oldest institution still in existence in North America is Harvard University founded in Cambridge, Massachusetts in 1636 C.E. The first French speaking university in Canada was Laval University founded in 1663 C.E., while the first English speaking university was the University of New Brunswick founded in 1785 C.E. If one looks into the

past far enough, one discovers traces of the modern university as far back as Plato's Academy around 385 B.C.E at Akademia (an ancient sanctuary for Athena, the goddess of wisdom). From Ancient Greece through the Medieval era and into today, democratic societies have found the existence of such institutions absolutely crucial. The people who have the privilege of teaching in such institutions are instrumental to the success of such institutions and the transmission of knowledge that occurs. It is the belief of the researchers of the current study that to maintain success and strive for ever higher success, it is critical to understand what creates a positive learning environment in such institutions as well as what characteristics and practices might help to better serve the teachers and researchers in such institutions.

## 2. Review of Literature

A struggling garage band plays a full house and the crowd goes crazy. A young girl shows the boys she can break dance as well, and finds acceptance. A fumbling fashion designer takes a bow at a high-end fashion show. A mother congratulates the daughter she used to console after a successful ballet recital. A lone man surveys the horizon after climbing what seemed to be an impossible cliff. The band plays us out with the Beatles song 'All you need is love.' Do what you love. Love what you do. The 'o' in 'love' is the Black Berry logo. What does passion mean in our current social context? What motivates a passionate person? What role does passion play in that motivation, and in turn, success? To answer these questions, we must understand passion, motivation, attribution theory, and characteristics of success. The word passion originates from the late Latin word *passio*, which means to suffer or endure. The leading example of this use of passion in the Western culture is the passion of Christ, namely, the crucifixion and death of Jesus. Recently, passion has taken on a largely different connotation, as elucidated by Vallerand et al. [13] who define passion as "a strong inclination toward an activity that individuals like (or even love), that they find important, and in which they invest time and energy". These researchers further develop this definition of passion by presenting a dualistic model comprised of Harmonious Passion and Obsessive Passion.

The Harmonious Passion (HP) is expressed as being the result of an autonomous internalization in lieu of one's own identity [12], [13], [14]. It takes place when there is an "absence of any contingencies attached to it" [12]. HP leads to a sense of personal endorsement, where

the individuals freely choose to engage in the activity, void of any compulsion or bear any overpowering space in their identity. HP is hypothesized to lead to positive affect during the task engagement, thus contributing to both openness to the experience and flexibility in the activity.

In contrast, Obsessive Passion (OP) is seen as the result of a controlled internalization with regards to one's identity. It is believed to originate from intra and/or interpersonal pressure, due to the fact that contingencies are attached to it. It is viewed as being overpowering and difficult to regulate. One experiences an "internal compulsion to engage in the activity" [12], resulting in a more rigid and conflicted involvement in the activity. It tends to lead to negative affect during task engagement, often resulting in a display of negative emotions, feelings of dependence, and inability or difficulty to disengage from thoughts of that activity [12], [13], [14].

The Harmonious Passion and Obsessive Passion are two concepts at opposite ends of the spectrum. While Harmonious Passion leads to mastery of the activity, Obsessive Passion is the result of performance attainment [14]. Research carried out by Vallerand et al. [12], [13], [14], has suggested that Harmonious Passion should lead to positive affect and less negative affect than Obsessive Passion during task engagement. With Obsessive Passion, it is almost impossible to fully disengage from thoughts about the activity. This obsession will lead the person to be distracted when working on other projects [12]. Thus Harmonious Passion leads to adaptive outcomes while Obsessive Passion results in less adaptive/maladaptive outcomes. Regardless of the type, the concept of passion is linked to one's everyday activities, becoming a part of the individual and his or her identity [12].

Vallerand et al. [13] identify two processes believed to influence passion: (a) activity valuation, which refers to the subjective importance of the given activity for the person, and (b) the internalization of the representation of the activity in one's identity. For some, passion becomes heavily absorbed in one's identity. According to Wang and Chiu [15], Harmonious Passion results from a spontaneous internalization of an activity into an individual's identity, while Obsessive Passion results from a controlled internalization of an activity or object into one's identity. Building on this idea Vallerand et al. [12] believe, "because OP entails a controlled internalization of the activity in one's identity, passion eventually takes control over the person and leads to rigid persistence in the passionate activity". Vallerand et al. [13] propose that "the concept of passion represents an important source of motivational energy underlying such persistent involvement;" therefore, synonymous with passion is motivation.

The position held by Vallerand et al. [14] is that passion represents a major motivational force that leads one to engage in deliberate practice. These researchers further contend that "passion provides people with the energy to engage in and persist in demanding practice

activities". They have found passion to be linked to creativity, drive, and motivation. Furthermore, Fredricks, Alfeld, and Eccles [3] argue that developing a passion can increase motivation, enhance well-being, and result in more positive affect.

Motivation is defined as being the result of "a moving cause" [1]; it is seen as energizing human behaviour, fueling motivation, enhancing well-being, and providing meaning in everyday life [12]. Similar to passion, "motivation is seen as something residing primarily within the individual" [1].

Current research on motivation "revolves significantly around the personal constructions regarding who one is, what one should strive for, and what one should become" [6]. Maehr and Meyer [6] have opted to substitute the term motivation with 'personal investment.' They have designated three dimensions of personal investment: (a) direction; (b) intensity; and (c) quality. These researchers argue "current motivation research is largely concerned with how two different types of schema frame motivation: thoughts about self and thoughts about purpose" [6]. Simply stated, thoughts about self are embedded with one's abilities and worth, while thoughts about purpose coincide with goals and tasks that need to be met [6]. What becomes relevant is one's individual construction of success and failure, as broken down into two goals: (a) Task goals, where the individual focuses on learning, or on progress and improvement; and (b) Ego goals, where the individual focuses on her or his own ability.

Ahl [1] highlights the belief that humans are motivated by one of six reasons: (a) rewards and punishment; (b) social norms, groups; (c) instincts and drive; (d) stimuli and/or rewards; (e) inner needs; and (f) cognitive maps; all of which elicit different reactions. For example, with rewards and punishments, it is believed that "humans act rationally and in their own self-interest" [1]. Yet, many argue about the source of motivation. For some, motivation is believed to be an innate quality, which proposes the existence of attribution theory [1].

According to Weiner [16], attribution theory is a cognitive model useful in understanding human motivation. It helps explain how people perceive the cause of their actions; when an individual is attempting to outline an attribution that will elucidate a specific behaviour or event. Weiner proposes that attribution theory is instrumental in the pursuit of goal attainment and cognitive mastery; this development led to the classification of two groups of individuals: performance oriented and mastery oriented, which in result, are stimulated by two motivators of behaviour: hedonism and understanding.

Assouline, Colangelo, Ihrig, and Forstadt [2] convey that "a main assumption of attribution theory is that an individual's behaviour is driven by the need to comprehend and master his or her environment, thus allowing for the prediction of future events". It is their belief that, before one can understand the effect, one first



must make sense of the cause. Their research with gifted students has shed light that, even though people generally attribute their success and failures to such factors as effort, luck, and so on, gifted students are fully aware that their performance is the result of effort and ability, both within one's control.

Shell, Colvin, and Bruning [10] have illustrated three control-related beliefs one imposes on oneself, in relation to attribution: (a) self-efficacy; (b) casual attributions; and (c) outcome expectancy. Self-efficacy encompasses one's capability for organizing and implementing the cognitive, behavioural, or social skills necessary for successful performance of a task. Casual attributions convey an individual's self-evaluation about the success or failure in a domain. Outcome expectancy relates to one's beliefs about contingencies between one's successful task performance and possible outcomes or the expectations that a behaviour will result in particular outcomes. Individuals who are regarded as successful in their domains tend to be genuinely interested in their work and apply themselves in task completion.

In research pertaining to the personal characteristics of successful professors [5;7], three primary characteristics were determined to be necessary for success. These three primary characteristics of success include interest, collaboration, and balancing between career and outside interests.

Freeman, McPhail, and Berndt borrow from the works of Dewey, to emphasize transitioning into a pedagogy for students that encompasses 'genuine interest,' where students should be encouraged to partake in activities and content matter in which they are interested [4]. Equally, those who are deemed passionate devote a lot of their time and energy into the activities that are of interest to them [14], and "having an unshakable passion, curiosity, and interest in your research is paramount to maintaining long-term motivation and intellectual stimulation" [7].

The term interest has been broken down into two types: (a) Individual Interest; and (b) Situational Interest. "Individual interest refers to an individual's relatively enduring predisposition to attend to and engage a class of objects, persons, or events" [4]. Situational interest "refers to the outcome of an interaction between a person and characteristics in the immediate context".

One of the successful professors interviewed by Mayrath hinted to the importance of being selective; people, as a rule, are inclined to select projects likely to influence aspects of their work [7]. In the most convenient explanation, interest is instrumental in one's commitment and advancement in an activity. It is challenging for an individual to be passionate or motivated in an activity if they have no interest in it. This concept can be seen in a study by Fredricks et al. [3], where it was reported that gifted students reported feeling bored and unchallenged when presented with content of no interest to them or insignificant in their lives [3].

For some, passion may be measured by productivity, and, if so, Mayrath has outlined four categories of where

authors attribute their productivity: (a) collaboration; (b) passion/curiosity; (c) research skills; and (d) time management. At the top of this list is collaboration. In institutions of higher learning, collaboration is listed seen as the most frequent reason for publication, as well as the most important reason for which one publishes. As Mayrath [7] points out, "working with one's colleagues provides an important forum for exchanging and brainstorming ideas. In addition, it is a strong motivation factor".

Kiewra and Creswell [5] have identified three factors that they examined to determine success: (a) Contributions; (b) Visibility; and (c) Influence. In their study, they incorporated a list of successful Educational Psychologists and interviewed them individually to uncover what attributions they listed as to why they were accomplished. Richard Anderson, one of the participants, credited his collaborations as the foremost reason he was productive. All participants viewed their collaborations as a reason to why they were productive, whether with colleagues or with students or with both.

How can persons who are considered passionate about their work hold on to their passion. What sets them apart from others? In their work involving the accomplished Educational Psychologists, Kiewra and Creswell identified five key descriptors to describe the three prolific scholars: (a) they are goal oriented and follow a pace; they produce a lot of work; (b) they give back to the academic community; (c) they are mentors; (d) they are risk takers; and (e) they have external interests. Perhaps the most shocking listed is the notion that it is possible for individuals who are passionate about their work, to detach themselves from it. As Kiewra and Creswell [5] stated, "all three scholars have interests outside academe's ivory towers".

Current research identifies passion as a major element in motivation, attribution theory, and success. It is the intention of this study to examine how passion plays a key role in the lives of successful professors at Queen's University by analyzing their day-to-day experiences, their interactions with others, as well as their overall career experiences.

### 3. Analysis of Findings

The first step in the current research study was to compile lists of academics who had won a major teaching award and/or a major research award during the past 10 years. After compiling these lists, the researchers contacted each faculty member via email. In total, 6 participants agreed to be interviewed for this study.

The research team interviewed each person who agreed to participate using open-ended questions. The open-ended interview questions invited comments on issues of motivation with respect to the participants' careers. Questions were particularly underpinned by the concept of passion. Interviews were audio-taped and later transcribed for analysis. Interviews were the most

appropriate form of data collection because they allow for in-depth understanding of how participants feel about their experiences [9]. Interview questions focused on the type of work the participants do, the value they place on this work, and the motivators behind this work, including the extent to which the interviewees see their work as a passion. Interviews varied in length from 45 minutes to one hour.

Because of the exploratory nature of this research and the limited previous study on the topic, relevant themes have been derived through a careful inductive analysis of the interview transcripts [8]. This procedure could best be described as a grounded theory approach [11], in that the theory was developed from the data collected, allowing the interviewees' own perspectives to take precedence. The research team read through each transcript and made notes of themes presented in each interview. Members of the research team compared their individual findings with each other and determined what themes were common to all interviews. The interviews were then put through a content analysis in light of these common themes; research members highlighted key words to map their frequency in the interviews. Such key words included Support, Balance, Passion, Interest, and Collaboration. Excerpts of these interviews are referenced by a Roman numeral representing the particular participant in order of occurrence (I-VI) while the page number refers to the transcript page.

This study identified 3 common themes regarding the practices of award-winning professors at Queen's University. These common themes blossomed from a micro level with the individual professor into a macro level involving the whole community. These themes include interest in the subject matter, the importance of collaboration, and the balancing act between career and outside interests.

### 3.1. Interest in the Subject Matter

At the individual level, every participant noted the requirement for interest in the subject matter they research and teach. When discussing overviews of their careers, participants predominantly began by mentioning passionate teachers who became role models and mentors, sparking and developing interest in their subject matter. "The teachers that I had were fantastic role models for me. I mean they were hardworking, kind, conscientious individuals who loved doing what they did, and it couldn't help but rub off". These role models helped to shape the teachers that these participants would become.

The participants in this study described the interest they have for their subject matter in their daily lives, "I mean, I just love what I do, it's the same thing that keeps you going when you get up in the morning". When discussing motivation, one participant related their motivation to interest as "a lot of the support through comes from within, I mean you have to enjoy what you're

doing and if you do and you feel it's right, you feel you're bettering society and helping young people" (III, 6). Another participant discussed how when interest in a project was depleted, it was time to end the project. As one participant noted, "if you find you're reaching a point where you don't like it, then get out of it because you're doing more harm to the people you're working with than good" (III, p.4). The interest of these participants plays a critical role in their daily lives and in turn helps shape how they view their role as a professor.

The participants of this study indicated that the primary role of being a professor was to use their own interest to help develop the interests of their students. One participant noted that "when I'm teaching I'm actually driven by interest, I hope that keeps my lectures interesting" (II, p.4). Another participant related "I'll do everything in my power to make the subject that I'm teaching interesting and relevant" (III, p.1). One participant stated "I think one of my missions is to really make it clear to younger people in that system that what counts is that you're really interested in something"; "in high school, there's all these awards that you get all the time, it's all about getting awards, it's not about building interests". Another participant related that "my role as a prof is to communicate the passion and the interest I have, that I feel for the subject". When questioned as to his method for ensuring this communication of interest, the participant responded:

*I make sure that when I start they can't tell which ones [literary works] I like and which ones I don't because it's not my job to tell them which ones I like and which ones I don't, it's my job to say that this is all really interesting and you decide.* This participant added that the students are only going to understand if you're interested. If the students can see that you're not interested then their natural reaction will be to wonder why they should be interested. In short, "if you're not interested they won't be, and if you are they will be". Another participant touched on this sentiment while examining the role of professors in their relationship to students by commenting, "students don't care how much you know until they know how much you care. If you live by that credo you will have a successful teaching career".

On a micro level, the individual lives led by professors, interest in subject matter is of critical importance. Interest in the subject matter is their personal inspiration; it is what keeps them striving in their careers. Moving towards a more macro level, by looking at the role of professors in relation to their students and the relationships that these encounters create, the participants of this study highlight the importance in developing interest among students.

### 3.2. The Importance of Collaboration

Every professor in this study discussed the importance of collaboration. Collaboration became apparent in several different relationships. These

relationships could be labeled a relationship between *teacher + student*, *teacher + faculty*, and *teacher + community*. This very progression mimics the same progression found among the overall common themes; moving from the micro to the macro level.

Looking back at their own academic development, many participants described the importance of *teacher + student* collaboration. Discussing the impact that their mentors had on them, how their mentors got them “hooked and immersed” in problems they found relevant. Many professors spoke of continuing this mentoring with their current students and the importance it gives them in continuing during difficult times, “I can’t afford to just say ‘okay, that’s it! I’ve had it’ right, because there’s a whole bunch of students who hope to graduate eventually. So what am I going to tell them, you know? Find somebody else?”. Students were viewed as a major source of support among the professors in this study, as well as the encouragement needed in academic growth and developing new ideas. “They [students] are constantly asking you questions which make you think about what you’ve taught in a different way”. Students were viewed as colleagues with important ideas to be developed, as one professor stated “I’ve just written a grant application for something that came out of a conversation with students”. In terms of collaboration, the professors interviewed in this study highlighted the micro level of interaction in the university setting, the relationship between *teacher + student*.

A second relationship discussed by professors interviewed in this study in terms of collaboration was *teacher + faculty*. Many professors indicated that a major source of support and contribution to academic growth came from collaboration with colleagues:

*The biggest insights or shifts you get when you go to meetings, when you talk to people who have different expertise and exchange ideas. Collaborations can be very instructive; talking to collaborators, people who are just as interested in a similar problem but have a very different angle to it.*

Many participants mentioned that the people they got to meet through their positions as professors were the most memorable experiences in their careers. These not only included members of their faculty, but also members of other faculties that they met at conferences. Participants noted that many new ideas came from these conferences, although usually at coffee breaks where they could discuss ideas openly. “A lot of research happens when the conference is over and everybody gets together for beer. Actually, it’s usually about the third beer that the really interesting projects start”. Collaboration with colleagues, as emphasized by the participants of this study, was critical for academic growth, support, and creativity in solving problems. It was also indicative of a move towards a more macro level in terms of interaction.

The final relationship described by participants in regards to collaboration was *teacher + community*. Describing connections made through students to their

parents and relatives, one participant stated “it actually makes you feel like you’re part of the community”. Several participants indicated that their interest in their subjects was sparked by real-life problems in communities outside of academia. One participant stated that as an academic one needs to “sometimes try and do things that are outside of your comfort zone”, in an effort to “actually invest yourself in to the world around you”. One participant, who had performed several years of work in agriculture prior to a life in academia, explained that he “would go in the evenings and sit down and talk shop on these farms...I was a newcomer, but I started connecting” as a way to refresh his mind in the community around him. This level, community involvement, demonstrates a very macro perception of academia and its workings in the community around such institutions.

Collaboration, as demonstrated through the *teacher + student*, *teacher + faculty*, and *teacher + community* relationships, moves from a micro level of individuals to a macro level of entire communities. “I think our time in our jobs is shaped a lot by the relationships we have”. In moving through this analysis of collaboration, one can see its importance both inside and outside of the institution as well as the importance of maintaining a balance with the outside world.

### **3.3. The Balance between Career and Outside Interests**

A number of different duties, dictated by the season of the year, create a very busy work week. Professors typically spend the Winter and Spring terms teaching and performing administrative duties, while in the summer months they are more often research-driven in their work habits. “I work a lot more than a 40 hour work week every week”. One can certainly imagine the stress this work load could take on any person, as well as those individuals’ families. Participants in this study highlighted the importance of balance between career and outside interests. “Going full tilt living a second life” outside of the institution and the balance with their career was viewed by participants as a major source of support as they described their successes and shortcomings in trying to maintain such balance.

Participants named family and friends as their major sources of support in overcoming hurdles in their careers. “I’m very happy with my family, they pop me back onto track”. When feeling overwhelmed at work, one participant related “I go for long walks with my wife and talk about it”. Several participants discussed how such outside balance was necessary as “any profession will eat you alive if you devote yourself to it wholly”. One participant described how when he had free time, “I spend it with my wife and I spend it with my two boys, and that to me is far more important”, believing that:

*If things are bad at work, there is no way it is splashing up onto my kids, period. Because if it does it’s to say that*

*the negative situation at work is more important than them and it isn't. Recognizing that in your career is important.* This participant then related the story of Oscar Peterson, the first African-Canadian piano player to sell out Carnegie Hall. After Oscar had left the stage, he realized that he had no one to phone to tell of the experience because he had been working so hard playing the piano. "When I won the two teaching awards, on both occasions both of my boys were with me, and I'd rather have lost with them there than won it without them there".

Not all participants could recount maintaining a healthy balance between career and outside interests. "I'm not sure whether I'm actually maintaining a good balance. I work a lot and sometimes I wonder if my family doesn't, you know, suffers for that". One participant spoke of the stress that the profession could take on family by relating "I'm not sure my wife ever liked me being a teacher because it does take a lot of time. I mean, at times it takes a tremendous sacrifice to be the spouse of a teacher". Another participant noted that she was "either spending too much time at work or not spending enough time at work" and that "if it wasn't for my husband, I wouldn't have the time to do what I want to do". Being entirely career-focused leads to situations where "there's no balance, friends or family that pick you up, and that's pretty hard".

Participants in this study heavily emphasized the importance of leading a 'second life' outside of the institution. "When you're here you're going full tilt teaching, when you're not here you're going full tilt living a second life". One participant recommended that "you need hobbies and you need interests in different fields that save you when things don't work out". Another participant also recommended investing time in hobbies by relating, "when I need a break, I'll just add a day or two to my conference and just go exploring, and do things like photography and other things, hobbies". Another recommendation to support balancing career and outside interests was to take your work outside of the office. One participant described taking a vacation with his family to a cottage on a lake for six weeks. In those six weeks, he spent 3 or 4 days working with intensity on theoretical problems but mentioned the effect his surroundings had on him: "I remember very well how I got into that, sitting out like with my laptop computer out on the water, and doing the math for that problem". The balance between career and outside interests (family, friends, and hobbies) thus carried a significant weight with the participants of this study. Describing a significant moment in his career, one participant recalled moving to Kingston, allowing "my personal life and my career to line up a little bit better so that's probably the most important thing that I did".

The participants in this study described their experiences as award winning professors. These experiences highlighted the importance of interest in their subject matter in their personal and professional lives. A harmonious balance between these two lives was

supported through collaborations stretching from the micro level of interactions within the institution to the macro level of the surrounding communities.

#### **4. Contributions to Knowledge**

The current study has contributed in many respects to the study of passion and its influence in education. The participants interviewed for this study have a strong inclination towards teaching and research, "I just love what I do". What encourages these professors to invest a tremendous amount of time and energy into these areas?: "The belief that it's important". These participants are examples of people living a passionate life. Understanding their experiences helps to solidify the definition of passion provided by Vallerand et al. [13].

While discussing their careers, many of the participants interviewed began by mentioning a role model or mentor who made the subject they were studying interesting. What began as an interest in their undergraduate degrees would eventually become their career. In this sense, the subject matter that these professors learned and now teach was free of contingencies and spontaneously internalized in a harmonious fashion with other aspects of their lives. The nature and development of this internalization help to support the hypothesis presented by Wang and Chiu [15] in regards to Harmonious Passion (HP). These participants are prime examples of people living with HP; their lives demonstrate that HP leads to positive affect during task engagement [12].

The current study provides evidence for the hypothesis put forward by Vallerand et al [14] that passion represents an important source of motivational energy to persist in demanding practice activities. As one participant related, "things fall through, grants don't get funded, papers get rejected, and there may be problems with administration, students, and so on. I'm down every now and then and you pick yourself up again". This work also helps to support the claim made by Ahl [1] that motivation is something that resides primarily within the individual. One participant noted that, although his motivation did come from within, it was also influenced heavily by the surrounding environment, "I'm internally motivated I guess, but also my motivation was waning at [a previous university] because I wasn't surrounded by an environment that was as positive and motivated as Queen's". The importance of a positive environment in which collaboration is abundant is expressed by one participant, "if there's people around who are really able to bounce back ideas and thoughts that is very, very motivating". This finding helps to cement the position put forward by Mayrath [7] that collaboration is a very strong motivational factor.

The current research adds to the work of Assouline, Colangelo, Ihrig, and Forstadt in attribution theory by seeking to understand the cause of motivation [2]. As one participant noted, "It'll be the first lecture, I say when 'I

come in here you will get 100%. I do not do 80% lectures, I do 100% lectures, and in return I would like something close to 100% from you". This statement helps to demonstrate how the participant's individual behaviour (giving 100% effort in his lectures) is driven by the need to master his environment (the classroom), allowing for the prediction of future events (the success of the students in the class) (similar to the ideas put forth by Shell, Colvin, and Bruning [10] in regards to outcome expectancy).

The characteristics necessary for success presented by Kiewra and Creswell [5] and Mayrath [7] are supported through the current study. The current study solidifies the work of Vanderall et al [14] and Mayrath by demonstrating how passion is paramount in maintaining motivation and intellectual stimulation. The current study adds to the knowledge presented by Freeman, McPhail, and Berndt [4] on Individual Interest (IND) and Situational Interest (SIT) by explaining that SIT, as demonstrated through collaboration in a positive learning environment, is a source of support and inspiration in terms of IND. The current study also contributes to the ideas concerning the challenge in performing research when there is a lack of interest as provided by Mayrath and Fredricks et al. [3], [7]. One participant related to this challenge by stating "there's lots of times when you're not interested as much as what you were doing" and that "sometimes it is a matter of just producing the work or getting through the work whether you're motivated or not".

Collaboration has been found to be a driving force in terms of productivity, a forum for brainstorming and a strong motivational factor in this study, cementing the work of Mayrath [7] and Kiewra and Creswell [5]. This study adds to existing knowledge on the importance of collaboration by moving outside of the scientific laboratories and conference halls and into the communities that surround the scholastic institution.

This attention given to the importance of collaborations outside of the scholastic institution is also an indicator of the importance of balance between career/institution and family/outside community. The participants of this study are goal oriented and follow a pace, they give back to the academic community, they are mentors, they are risk takers, and they have external interests. The participants of this study demonstrate the five key descriptors of prolific scholars produced by Kiewra and Creswell [5]. These researchers argued that all three scholars in their study had "interest outside academe's ivory towers" and it is clear that the award winning scholars from Queen's University in Kingston, Ontario who participated in this study have interests outside of their institution's limestone towers. This study contributes to this understanding of balance by providing suggestions from the participants that helped them in their own lives, whether it be adding a day to a conference or performing your work in a different setting such as a peaceful lake on a family vacation.

## 5. Conclusion

The purpose of this study was to better understand how successful academics at Queen's University maintain their passion for their career. Through interviewing winners of major teaching and research awards, the researchers of this study learned that these academics maintain their motivation for success through interest in their subject matter, collaborations within and outside of their institution, and by creating a healthy balance between their careers and their 'second' lives. By illuminating these experiences, the researchers of this study hope to help other professionals bring passion into their own lives.

As educators, teachers are one of the primary role models in a child's life. The participants of this study consistently mentioned role models and mentors who helped them to develop their interest and in turn lead passionate lives. If teachers are to be these role models, they must strive to live a passionate life. To understand how to live such a life, the researchers of the current study inquired into the lives of successful professors at Queen's University and 'discovered the passion.' Passion is key, but so are the relationships with the people with whom teachers interact: students, fellow teachers, and members of the outside community. These relationships are key to creating a positive environment where children can pursue their individual interests while creating situational interest that helps to further the individual. In short, by leading a life of passion and encouraging the youth to discover theirs, teachers are providing the youth with the key to success regardless of the area of interest.

## 6. Future Work

Although this study focused on only six professors from Queen's University, it is highly replicable. It would be interesting for future research to be performed in a similar manner in other academic institutions. The editors of Maclean's magazine produce an issue annually grading the post secondary institutions of Canada. These gradings are based on students' experiences. It would be beneficial to conduct research similar to this study in other post-secondary institutions across the country to produce an added element towards the grading representing the environment of the institution as perceived by the faculty. This inclusion could help to give a balanced perspective of the institution as this issue is primarily a guide for which post-secondary institution a perspective student should choose.

Other future work that would be beneficial includes replicating this study in various levels of education. Such research could give valuable information to Directors of school boards, Principals of schools, as well as teachers and educational assistants in the classroom. The study of several different environments would provide insight into what creates a successful and positive learning environment but also what may impede such

development.

This study delved into motivation and presented the importance of external factors in motivation, mainly through collaboration at several different levels and the importance of balance with an outside life. Future research that would be beneficial could be to replicate the current study in several different work environments. Such information could provide further insight into how passionate people live their lives, and give examples regardless of profession, as to how to lead a life of harmonious passion.

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## **Session 7:        Reading and Writing Education**

The Effect of Using Comic Strips on the Development of Reading Comprehension  
(Roya Khoii, Zahra Forouzes)

Organizational Difficulties of Egyptian Students' Essay Writing  
(Abdelhamid Ahmed)

Innovative Ways to Promote Shared Book Reading  
(Natalia Kucirkova, David Messer, Denise Whitelock)

Reflective Writing as a Means to Assess Understanding  
(Sozan Hussain Omar)

# The Effect of Using Comic Strips on the Development of Reading Comprehension

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## Abstract

*This research examined the effect of using reading passages with comic strips on the development of reading comprehension. The study was conducted on 62 female Iranian beginner EFL learners. In the control group, the learners received regular instruction in reading comprehension, whereas in the experimental group comic strips were used to teach reading comprehension. In the quantitative phase of the study, a t-test for independent groups was run between the means of the two groups in order to either reject or accept the stated null hypothesis at the 0.05 level of significance. Nevertheless, the analysis of the results of the t-test revealed that using reading passages with comic strips does not have any significant effect on making progress in reading comprehension.*

## 1. Introduction

Reading, according to cognitive systems, is the process by which individual words are identified from their printed and written forms and by which we combine these words into simple ideas or propositions in order to be able to form a mental model of the text based upon inferences that take us beyond the given information.

According to Grabe, the last decade, in particular, has been a time of much first and second language research resulting in many new insights for reading instruction [5]. This expansion has contributed significantly to several factors: the efforts to address the needs of many different learner groups, the recognition that reading is probably the most important skill for second language learners in academic contexts, and the challenge to explore and understand basic comprehension processes.

Scholars and teachers agree that motivation is crucial in language teaching. One well-known way to arouse students' interest can be achieved by bringing something extraordinary and new into the language class. Comic strips can be used efficiently for this purpose especially among teenagers and young adults

because it brings a cheerful atmosphere into the class (Csabay [3]). EFL and ESL teachers often give students reading materials accompanied by visuals such as pictures, cartoons, or comic strips to make reading more enjoyable and comprehensible.

Researchers like Levie and Lentz [7] and Levin, Anglin, and Carney [8] have outlined the five major functions of visuals in reading:

- Representation: visuals repeat the text's content
- Organization: visuals enhance the text's coherence
- Interpretation: visuals provide the reader with more concrete information
- Transformation: visuals target critical information in the text and recode them in a more memorable form
- Decoration: visuals are used for their aesthetic properties or to spark reader's interest in the text

In the meta-analysis of the effects of visuals all but the decorative function facilitate memory. These functions are, in order of importance, transformation, interpretation, organization, and representation. The representational function overlaps with the other three (i.e., transformation, interpretation, and organization) because visuals always repeat part of the text's content, either the details or the relationships between the details.

In general, it can be claimed that comic strips are not only used for fun in a language class, but there are also methodological reasons for teachers to use them. According to Oller's episode hypothesis, a text that has a story line and a logical structure is easier to remember and to recall [11]. Comic strips provide the structure and stimulus to which students respond, and, as Brown points out, since stories are universal, students from different cultures can understand their structure and identify with the characters, which helps them to acquire vocabulary, grammatical and communicative competence, and provides them with special cultural knowledge as well [1].



## 2. Literature Review

Researchers have used numerous theoretical frameworks to describe, explain, and predict the effects of visuals on cognition in general and on reading comprehension in particular, among them are the mental model theory [6], [12], [13], [15]. The dual coding theory (DCT), which concerns the nature of language and imagery, can perhaps provide a framework to unify these disparate theories.

According to the theory, the human cognition consists of two subsystems that process knowledge simultaneously, one processing the nonverbal objects (i.e. imagery) and one dealing with language (verbal). The two systems have different functions; the verbal subsystem processes and stores linguistic information (words, sentences). Information is stored in discrete, sequential units that are called logogenes. Whereas the visual or imagery subsystem processes and stores images and pictorial information. Processing in visual systems is believed to be more holistic and based on continuous organizational units termed images. While the two subsystems can be activated independently, the interrelations and connections of the two systems allow the dual coding of information. The interconnectedness of the two systems permits cueing from one system to the other, which, in turn, facilitates the interpretation of our environment. Both visual and verbal codes for representing information are used to organize incoming information into knowledge that can be acted upon, stored, and retrieved for subsequent use.

These two systems enable the analysis of external scenes and the generation of internal mental images. However, unlike the schemata theory, DCT assumes that the verbal system is organized non-sequentially, resulting in different constraints in processing. According to Sadoski and Paivio the structuring and processing of these mental representations, or encodings, is the basis of all cognition in this theory [15]. The Dual Coding Theory can have applications in many cognitive domains, including problem solving, concept learning, language, etc.

In reading, DCT accounts for hypothesized bottom-up and top-down processes. Regarding bottom-up processes, DCT assumes that language units derived from natural language are organized and mentally represented in various sensory modalities. Based on the familiarity and effects of the context, the reader may use these representations to perceive grapheme-phoneme correspondences, and the visual, auditory, and/or articulatory configurations of letters, words, or word sequences. Regarding top-down processes, DCT provides a broader and more specific account of meaning, coherence, and inference effects. Activating both verbal and nonverbal mental representations of

text helps readers create alternative, interconnected contexts for generating inferences and integrating text.

One of the most influential theories to be formulated in cognitive psychology in recent years is Johnson-Laird's [6] theory of mental model. The theory seeks to provide a general explanation of human thought; at its core is the assertion that humans represent the world they are interacting with through mental models. Johnson-Laird credits Craik [2] with the original statement of this idea. In order to understand a real-world phenomenon, a person has to hold what Johnson-Laird [6] describes as a *working model* of the phenomenon in his or her mind. Mental models are not imitations of real-world phenomena; they are simpler. They do not correspond completely to what they model – Johnson-Laird argues that adding information beyond a certain level does not increase its usefulness. A mental model which explains all aspects of the phenomenon that a person interacts with is an appropriate one. In order to provide explanation, it has to have a similar structure to the phenomenon it represents; it is this similarity in structure which enables the holder of the model to make mental inferences about the phenomenon which hold true in the real world. Since the choice of structure is not arbitrary, but analogous to that of the phenomenon, the mapping relationship between mental models and the phenomena they represent is a referentially isomorphic one. Thus, mental models do exhibit similar characteristics to a picture-like representation; and, as with a picture-like representation, whether a model is appropriate or not can be a point of argument.

Humans employ a kind of mental logic, which is similar to the propositional logic employed by logicians, when making inferences about the world. Johnson-Laird does not argue that human beings are incapable of logical inference, nor does he seek to devalue the concepts of mathematical logic. He simply seeks to explain the puzzle, posed by empirical and observational facts, that human beings are capable of logical inference, yet often deliver answers and decisions that cannot be explained in terms of logical reasoning.

There is overwhelming evidence that when a text is accompanied by adjunct displays (e.g., displays that appear outside the main body of the text such as pictures), the comprehension of text information represented in the displays is facilitated [14]. Most researchers agree that this 'adjunct display effect' (ADE) demonstrates that these displays are potentially effective and should accompany texts when possible.

Among the more interesting explanations for the ADE is the one that focuses on the possibility that information contained in adjunct displays is processed differently than information contained in text. The conjoint retention (CR) hypothesis states that text

information referenced in an adjunct display is encoded in memory both verbally and spatially, whereas text information that is not referenced in an adjunct display is encoded only in verbal format [14]. Thus, information that is encoded conjointly is more likely to be retrieved because the spatial representation provides an additional node that may be activated after an initial attempt to retrieve the verbal representation fails. For this reason, the spatial features of an adjunct display are thought to serve as a second stratum cue.

The CR hypothesis is basically an extension of dual coding theory, which contrasts concrete vs. abstract information [12]. CR, however, contrasts only verbal vs. spatial information. Although the CR hypothesis was developed by investigating geographic maps, CR may also explain the ADE when using other types of adjunct displays.

Not all research has found images to be beneficial. In a review of studies on instructional texts found that in about 15% of them no significant effect of including images was observed [7], [9]. One possible explanation is that the choice of image is important. They understood that participants who read a text without a diagram were actually more motivated and more interested to continue reading than those who read the same text accompanied by a poor diagram. This suggests that visual resources are not always beneficial, and that the *quality* and *appropriateness* of a visual resource are likely to be important.

The failure of visual resources to aid instruction in some studies has often been explained as either a result of students' learning styles, or due to students' not processing the illustrations adequately. The latter is thought to be a result of the apparent ease of processing an image, giving the students the false impression that they have fully understood an image [11]. Too much attention may be deployed to the illustrations themselves rather than to the accompanying text.

### 3. The Study

#### 3.1. Research question

This research aimed at providing an answer to the following research question:

*Does using texts with comic strips have any effect on the reading comprehension ability of beginner EFL learners?*

#### 3.2. Participants

A total number of 62 female beginner students at Ayandeh Sazan English Institute in Tehran

participated in the study. A standardized achievement test consisting of 80 vocabulary, grammar, and reading multiple-choice items was administered to determine the homogeneity of the subjects. The students whose scores fell between one standard deviation above and below the mean were selected. Therefore, the subjects participating in the study consisted of 42 students within the age range of 13-16. They were divided into two groups: 22 subjects in the control group and 20 subjects in the experimental group. The data were gathered from the beginner students studying Let's Go, book 4, units 1 to 8, in the course of 2 successive semesters (3 months) [4]. The passages were chosen from the subjects' course book.

#### 3.3. Instrumentation and Materials

First of all, a standardized achievement test was given to 62 students. Then the four reading passages in the achievement test were also used as the reading pretest to assess the subjects' reading ability and to ensure that there was no significant difference between them in terms of their reading skill. After scoring the papers, the subjects were divided into two groups of twenty and twenty two. The instruments used in the study consisted of some texts and comic strips. The reading test consisted of several passages which were presented to the subjects in both groups. Each semester consisted of 18 sessions plus a midterm and a final session. Each session lasted 1:30 hours and was held three times a week.

At the end of the treatment, a posttest similar to the pretest was administered to the subjects in both groups. The posttest consisted of 14 reading questions. Another posttest consisting of 22 questions was administered to the subjects in both groups in order to find out whether the use of reading passages with comic strips had any significant impact on the development of the subjects' reading comprehension. A secondary objective was to neutralize the practice effect because the students had taken the first posttest on a previous occasion. The second posttest which was administered to both groups was accompanied with comic strips for the experimental group, while the control group received the same test without comic strips.

#### 3.4. Treatment

The procedure for the presentation of the reading passages in the experimental group was as follows: at the beginning of the session, the teacher started the class with a warm up and then wrote the title on the board and asked the students to talk about it. The students read each paragraph in pairs and spoke about it. After that the teacher taught the passage with comic

strips and asked some questions in order to find out whether they had understood them. Finally, the students talked about the passage using the comic strips, which had been made based on the sentences and not the overall messages of the passages.

The use of the native language was not allowed in the class. The conventional procedure was used to introduce the passages to the control group. That is, first, the teacher started with a warm up in the class. Then scanning and skimming techniques were used. Students tried to understand the meaning of the sentences by using a dictionary or asking the teacher. Finally, the teacher asked some questions in order to make sure that the students had grasped the meaning of the passage. The classroom procedure followed a step by step guideline in the control group, and the teacher was obliged to follow it to its details.

#### 4. Analysis of Findings

*Achievement test:* As mentioned before, an achievement test based on the book that the students had studied the previous semester was administered to the subjects in order to determine their homogeneity. The descriptive statistics for the achievement test are given below.

**Table 1. Descriptive statistics of the achievement test**

	Items	Mean	V	SD	KR21
G	26	13.82	47.26	6.87	0.90
V	21	11.70	32.47	5.69	0.89
R	14	7.56	14.70	3.83	0.82

G= Grammar, V= Vocabulary, R= Reading

To estimate the reliability of the test, the KR-21 formula was used. The reliability index of the test was 0.94.

In order to guarantee the content validity of the test, the researchers asked their colleagues teaching the same book to the same level students to judge the level of conformity between the table of specifications of the test and the table of contents of the book. They unanimously decided that the test enjoyed content validity and was at the right level of difficulty.

*Pretest:* The four passages of the achievement test (with Flesch-Kincaid readability indices of 86.6, 87.5, 84.6, and 89.9 and a mean of 87.15) were also used in the reading pretest to assess the subjects' reading ability and to ensure that there was no significant difference between them in terms of their reading skill. The time allocated to the test was 20 minutes.

**Table 2. Descriptive statistics of the reading pretest**

	N	Min	Max	Mean	V	SD
Ex	20	3	12	7.7	10.01	3.16
C	22	2	13	7.76	15.89	3.98

Ex= Experimental group, C= Control group

The result of a pooled variance between the variances of the two groups' scores on the pretest indicated that they enjoyed equal variances ( $F=1.58$ ). Moreover, an independent t-test was run to compare the mean scores of the control and experimental groups on the reading pretest. The t-observed value was 0.06, which was lower than the t-critical value of 2.021 at 0.05 degrees of freedom. This indicated that the difference between the means of the two groups on the reading pretest was not statistically significant.

**Table 3. Independent t-test for pretest means of the experimental and control groups**

Reading	t-test for equality of means		
	T	df	Sig (2-tailed)
Pretest (1)	0.06	40	2.021

\* $P < .05$

After the treatment, two reading posttests were administered to the students. The descriptive statistics of these tests are given below.

**Table 4. Descriptive statistics of reading posttest 1**

	N	Min	Max	Mean	V	SD
Ex	20	2	12	7.55	9.94	3.15
C	22	2	15	7.45	15.40	3.92

**Table 5. Descriptive statistics of reading posttest 2**

	N	Min	Max	Mean	V	SD
Ex	20	5	19	11.35	24.87	4.98
C	22	3	20	10.90	35.70	5.97

**Table 6. Descriptive statistics of reading posttest 2 for both groups together**

	N	Mean	SD	V	KR-21
Posttest (2)	42	11.11	5.46	29.86	0.85

Later, two independent t-tests were performed between the means of the control and experimental

groups on the two post-tests. The results are given in Tables 7 and 8.

**Table 7. Independent t-test for posttest (1) means of the experimental and control groups**

t-test for equality of means			
Reading	T	df	Sig (2-tailed)
Posttest (1)	0.09	40	2.021

\*P<.05

**Table 8. Independent t-test for posttest (2) means of the experimental and control groups**

t-test for equality of means			
Reading	T	df	Sig (2-tailed)
Posttest (2)	0.26	40	2.021

\*P<.05

A careful study of Tables 7 and 8 reveals no significant difference between the means of the two groups on the posttests. Clearly, the experimental group did not outperform the control group on either of them. In other words, there was no significant difference between the means of the two groups at 0.05 level of significance at a *df* of 40, which indicated that the treatment had not been effective for the experimental group.

## 5. Implications

The results of this research can offer some pedagogical implications for language teachers and textbook developers. They can be of interest to English teachers who are in search of effective techniques for improving students' reading comprehension ability. They also suggest that material developers designing textbooks for ESL and EFL learners should choose visuals cautiously. Whether they are pictures, cartoons, or comic strips, visuals should help readers process the linguistic input and retrieve the necessary information for output. However, as mentioned before, they might be distracting rather than helping students concentrate on the information in the text. Although striving to maximize comprehension by choosing visuals that are compatible with the text, they should also consider the readers' language proficiency levels. L2 reading teachers should use pictures and visual aids with caution, regardless of learners' age or stage of language development because overloading them with images might not challenge them cognitively.

## 6. Conclusions

Based on the results of the study, the researchers concluded that the use of comic strips with reading passages does not significantly improve the reading ability of elementary level foreign language learners. The students apparently did not need the pictures to support the simple texts used for them.

The mental model theory proposed by Marcus, Cooper, and Sweller, however, seems to offer a plausible explanation [10]. These researchers argue that graphics or illustrations can reduce the cognitive load associated with complex reasoning tasks because they can present essential information more concisely than equivalent textual statements. Illustrations are easier to process than text because they show spatial relations, whereas the text requires the reader to construct a mental representation of the relations. In other words, visuals facilitate mental model building. However, when comic strips do not reflect the text's linguistic complexities, simpler comics tend to interfere with readers' ability to construct a mental model as complex as the text. According to this logic, to construct an accurate mental model of the text, readers need visuals that closely mirror the text's structure and complexity.

During the process of reading comprehension, readers consciously analyze and compare what they have noticed while reading. When the reader has difficulty comprehending the text's linguistic input because it is too difficult, the comic strip can call the reader's attention to the linguistic input. But comic strips can also distract the reader from the text's linguistic complexities, especially when they do not reflect the information embedded in the text. The differential effects of comic strips on the reading comprehension of learners at different levels challenges the commonly held assumption that comic strips accompanying texts can improve students' reading comprehension, thus calling into question Sadoski and Paivio's claim that the DCT is universal [15].

The results of this study suggest that the effects of comic strips on beginner L2 learners' reading comprehension might be constrained by a number of factors, such as the students' comprehension level of the written text and their individual strategies for processing the text. They also imply that, at least at elementary levels of language proficiency, more than visuals, students need to rely on their mental abilities, increase their world knowledge, and acquire the skills that make them better readers.

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# Organizational Difficulties of Egyptian Students' Essay Writing

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## Abstract

*The current study focuses on the organizational difficulties that Egyptian student teachers of English encounter when writing an English essay. The current study aims at investigating students' cohesion and coherence writing difficulties in English. A mixed method research design was used including a questionnaire and a semi-structured in-depth interview. Analysis of findings revealed that students encounter some problems in the cohesion and coherence of English essay writing. Discussion and implications of these findings are presented.*

## 1. Introduction

Students' writing in an EFL classroom context should show their awareness of their own communicative goals, of the reader, and of the writing context. Essay writing, which constitutes a problem for many ESL/EFL students worldwide, is a major challenge for many student teachers of English at Helwan Faculty of Education in Egypt. Despite numerous approaches to the teaching of writing (such as the product-based approach, the process-based approach, and the post-process approach) having evolved from different teaching methods, tackling EFL writing is still one of the most challenging areas for teachers and students. Egyptian student teachers of English at Helwan Faculty of Education have to pass many academic courses in English. Nevertheless, these students still experience some problems in the cohesion and coherence of their English essay writing as indicated by the results of a preliminary essay writing questionnaire administered to one hundred students and the informal interviews.

To the best of my knowledge, most of the Egyptian studies conducted in the field of essay writing at the university level are, however, quantitative. The problem of the current study is concerned with exploring the organizational difficulties that Egyptian student teachers of English encounter while composing their essays in English.

EFL lecturers and students face certain problems in teaching and learning writing. As many teachers of English have noted, acquiring the writing skill seems to be more laborious and demanding than

acquiring the other language skills [39]. In fact, producing a coherent piece of writing is an enormous challenge, especially in one's second language [26]. This is magnified by the fact that the rhetorical conventions of English texts—the structure, style, and organization—often differ from those in other languages [22] as they require a great effort to recognize and manage the differences. This is particularly true of the rhetorical conventions of the Arabic language as students' mother tongue.

In many Arab countries including Egypt, the education systems emphasize writing for taking tests. In this respect, some studies in the Arab world and a few Egyptian studies were conducted offering different approaches and remedial programmes to overcome the decontextualization of writing and develop students' EFL essay writing skills. Some of these studies in the Arab world arena are [10], [18], [31].

The current study attempted to find answers to the following research questions:

- How do Egyptian student teachers and their lecturers perceive the cohesion and coherence of the written essays?
  - a) How do Egyptian student teachers of English perceive the cohesion and coherence of their written essays?
  - b) How do Egyptian essay writing lecturers perceive the cohesion and coherence of their students' written essays?
- What factors hinder students' development of cohesion and coherence in essay writing from the perspectives of both student teachers and their lecturers?

## 2. Literature Review

The purpose of this literature review is to shed light on some aspects related to EFL Arab students' organizational writing difficulties with special reference to cohesion and coherence. Coherence, or texture, is the combination of semantic configurations of two different kinds: register and cohesion [13]. Coherence in written text is “a complex concept, involving a multitude of reader- and text-based features” [17]. Text-based features mean cohesion (i.e., the linking of sentences) and unity (i.e., sticking to the point). Reader-based

features mean that the reader interacts with the text depending on his/her prior knowledge. Coherence is defined as “the organization of discourse with all elements present and fitting together logically” [16]. This denotes that a coherent essay consists of an introduction, a thesis statement, rhetorical support, and a conclusion. [3]. Recently, Coherence is defined as “an outcome of a dialogue between the text and its listener or reader” [37].

A number of research papers in the Arab world have spotlighted students’ coherence problems in English writing [1]; [11], [36]. For example, Arab students’ written texts revealed that repetition, parallelism, sentence length, lack of variation and misuse of certain cohesive devices are major sources of incoherence and textual deviation [29]. Similarly, cohesion and coherence problems in the writings of Yemeni university students majoring in English were investigated and findings indicated that students encountered coherence problems as a global organisation of a given text [34]. In addition, other studies asserted that Yemeni and Moroccan students have some weaknesses, in terms of coherence and cohesion, manifested in the students’ written texts [2], [5], [14].

The second section of this review deals with EFL essay writing cohesion. Many researchers agree that cohesion, on the macro level of writing, is related to linking ideas whereas on the micro level of writing, it is concerned with connecting sentences and phrases. "The concept of cohesion is a semantic one; it refers to relations of meaning that exist within the text, and that define it as a text" [13]. Many researchers have highlighted the importance of text cohesion claiming that a text stands as a text by means of cohesion. But for cohesion, sentences would be fragmented and would result in a number of unrelated sentences [16].

Reviewed studies pinpointed that cohesion constitutes a serious problem to Arab students. Many researchers in different countries in the Arab world including Bahrain [29], Oman [25], Yemen [34], [36], Tunis [5], Jordan [13], Morocco [2], Lebanon [9], and Syria [24] have paid our attention to the different aspects of cohesion difficulties from which students complain.

However, to the best of my knowledge, no single Egyptian study tackled coherence and cohesion in students’ English writing. Hence, the current study is exploring the coherence and cohesion difficulties that Egyptian student teachers of English face in their English essay writing. This, in turn, will inform my research whether these difficulties in the Egyptian context are similar to or different from those of the previously reviewed studies.

### 3. Analysis of Findings

In view of the exploratory nature of the current study, and its context-specificity, the naturalistic orientation of interpretive, qualitative research is an appropriate choice. The interpretative approach aims at understanding the context within which participants act, and understanding the process by which events and actions take place telling us from the emic’s view why things have happened [8], [23]. The interpretive approach will help the researcher explore and understand the context within which essay writing in English is taught and learnt at Helwan Faculty of Education in Egypt. This, in turn, will help the researcher reveal the difficulties that Egyptian student teachers of English encounter in the cohesion and coherence of their written essays.

The sample of the current study consisted of one hundred and sixty five student teachers of English of whom fourteen and seven essay writing lecturers were selected to be interviewed. The current study made use of a questionnaire and a semi-structured interview. All the sections and sub-sections of the questionnaire have been logically sequenced according to the process of writing development and the research aims.

Findings of the current study revealed that Egyptian student teachers of English experience some coherence and cohesion difficulties in their English writing. In relation to coherence difficulties in their English writing some difficulties were revealed such as difficulty writing the introduction, the thesis statement, the topic sentence, writing concluding sentences and writing the conclusion. In the same vein, university lecturers reported that their student teachers have difficulty in writing the thesis statement, the topic sentences, transition of ideas, and sequence of ideas.

A number of reasons are associated with students’ coherence problems in English essay writing. First, the effect of topic-specific background knowledge was seen as influential on the general quality and local coherence of student writing [20]. Second, it was highlighted that low English proficiency students find it difficult to develop coherent writing due to paying attention to language matters rather than making meaning [21]. Moreover, it was indicated that Arab university students tend to follow certain techniques in their written English that make their writing incoherent such as including a broad statement in the opening sections of their essays before introducing the topic sentence [1]. In addition, Arab students overused coordinate sentences and misused topic sentences which were the reasons for their incoherent and unacceptable quality of writing [11].

To help students surmount the coherence difficulties in their English writing, some suggestions are provided. First, it is suggested that writers not

only need to generate, present, and relate intricately linked ideas, but also need a large body of loosely associated information that can be used to elaborate, embellish, and enliven the presentation [20]. Second, it is recommended that textual features should be paid more attention in overcoming students' coherence problems in writing as they can be responsible for disguising an underlying coherence. This can be fulfilled through organizing materials and fostering audience awareness to help students with coherence problems [5]. Workshops and group work in the classroom have been reported as contributing factors that can improve and enhance the writing process in general and coherence in particular [34].

In reference to student teachers' difficulties in cohesion, some were reported such as difficulty in using cataphoric and anaphoric reference, ellipsis, substitution, and genre related cohesive ties. In addition, overusing certain cohesive ties was also reported by university lecturers. Diverse studies have acknowledged the importance of text cohesion in English writing as a mechanism that facilitates discourse flow. These studies also added that constructing cohesive texts by second language learners requires focused instruction and additional attention [3], [27], [30]. Besides, many reviewed studies asserted that writing cohesively in English constitutes a serious problem to Arab students [2], [5], [9], [13], [25], [29], [34], [36].

There are many reasons that account for the cohesion difficulties in the English writing of Arab students in general and Egyptian students in particular. First, lack of reading English texts can cause students' difficulty in writing cohesively. This was confirmed by examining the appropriate or inappropriate use of cohesive devices and the overall cohesive harmony in the writing of 48 third- and fifth-grade students from a school district northwest of Chicago [6]. They found out that good writers achieved significantly more complex cohesive harmony than did poor ones. Besides, poor writers made inappropriate use of cohesive devices significantly more often than did good writers.

Second, studying lists of interchangeable cohesive devices might help justify the difficulty in using cohesive devices. In relation to cohesion in discourse in general and connector usage in particular, students misused some of the cohesive devices in their writing [12], [29]. The qualitative findings of another study confirm the overuse and underuse of individual connectors, as well as semantic, stylistic and syntactic misuse [12]. They recommended that learners should not be given lists of 'interchangeable' connectors but instead they should be taught how to use them in context using authentic texts.

Other researchers have attributed the difficulty Arab students encounter in cohesion to the cultural

differences between Arabic and English. Exploring the effect of socio-cultural backgrounds on students' use of linguistic and textual resources in meaning construction, these researchers argue that the cultural differences between Arabic and English speech communities are directly responsible for the different use of cohesive devices in the two languages [25]. They claim that Arabic cohesion is characterized as context-based, generalised, repetition-oriented, and additive. In contrast, English cohesion is described as text-based, specified, change-oriented, and non-additive. In my view, I think that socio-cultural factors affect the cohesion of Egyptian student teachers' writing. This is represented in students' many pre-university learning experiences such as literal translation and use of written clichés in their writing.

Furthermore, lack of cohesion knowledge was said to be another factor causing students' difficulty in cohesion. This was asserted by a researcher who investigated the expression of contrastive transitions in the different writings of Omani and Indian freshmen students [32]. According to the results of this study, the levels of confidence in the students' choices between appropriate and inappropriate contrastive transitions were different, and students often had little or no knowledge whether they made the correct choices or not.

In addition, it has been proved that Arab students' lack of proficiency in using cohesive devices made them overuse some coordination devices [24]. He added that students were in need of cohesive devices because they used many coordination devices or linkers, in particular 'and'. Moreover, it is pinpointed that the use of cohesive devices is affected by a number of factors including the developmental level of the writers, the acquired behaviour of second language learning from teachers and textbooks and the transfer of writing habits and linguistic patterns from the first language [18].

To overcome these problems a number of suggestions were made. First, topic familiarity, and exposure to analogous tasks in routine academic practices can be helpful in enhancing student writers' ability to produce texts which are more fairly coherent and cohesive [14]. Second, using workshops and group work in the classroom is recommended to help develop the writing process greatly [34]. Besides, learners should not be given lists of 'interchangeable' connectors but instead they should be taught how to use them in context using authentic texts [12]. Finally, students should be knowledgeable about the uses of different cohesive ties [32].

Findings of the current study revealed that there are a number of factors and contexts lying behind these different coherence and cohesion difficulties. At the psychological level, students faced a number of challenges including lack of motivation, lack of



self-confidence, writing anxiety and mental exhaustion. At the teaching level, a number of factors contributed to Egyptian students' different writing challenges such as teaching workload, limited lecture duration, scarcity of teachers' professional development, teachers' negative attitudes towards teaching essay writing, the essay writing course, teachers' unawareness of research. At the socio-political level, restriction of Egyptian students' voice in writing was underscored. Finally, Egyptian students' essay writing was reported to be affected by a number of socio-cultural contexts such as the reading culture and its effect on essay writing development, students' prior knowledge, pre-university learning experiences such as the use of written clichés, rote learning, lack of discussion and competitive learning environments, insignificance of English composition, Arabic interference in English writing, and proficiency level in English.

#### 4. Contribution to Knowledge

The current study contributes significantly to EFL higher education in Egypt in terms of English language pre-service teacher education, educational research, and curriculum planning and design.

From the perspective of English language pre-service teacher education, the current study has the potential to improve English language teacher education in a number of ways:

- a) It provides an understanding of the difficulties faced by student teachers in the cohesion and coherence of their written essays. This, in turn, is significant for teacher educators since it aims to provide implications for developing their essay writing syllabus, methods of teaching, and assessment.
- b) It also sheds light on the importance of students' needs as this will enable teacher educators to know how to satisfy these needs and conduct successful and memorable learning.
- c) It also highlights the significant development in the academic achievement of students in other courses due to their ability to produce coherent and cohesive essays. This will help better prepare highly qualified teachers of English who could write coherently and cohesively.

At the level of educational research, the current study makes a significant contribution summarized in two respects:

- a) It serves as an example for further studies in education in terms of using the interpretive-constructivist research framework. This approach has been totally neglected in Egypt, no previous study having used an exploratory approach to investigate the coherence and cohesion difficulties faced by Egyptian student teachers of English.

- b) It also serves as an example of the triangulation of research methods such as questionnaires, and semi-structured in-depth interviews. This mix of research methods has not been extensively used in Egypt before to study Egyptian participants.

In terms of curriculum planning and design, the study is potentially significant as it highlights the following:

- a) It helps curriculum designers take into consideration students' needs and interests in designing their curriculum.
- b) It opens curriculum planners and designers' minds to different approaches to the teaching and assessment of essay writing in general and organizational skills in particular.

#### 5. Conclusion

- The teaching materials used with Egyptian students should cover a wide range of cohesion and coherence skills coping with students' different proficiency levels.
- The teaching techniques adopted by Egyptian essay writing lecturers should be varied to help meet the needs of students with different abilities.
- Teaching and learning tasks should be graded and varied to help students make the most out of them, especially in large classes of different abilities and skills.
- The feedback practices employed by the essay writing lecturers should combine both types of oral and written feedback, be promptly given to students, be critical and constructive in nature to challenge students and help them develop the different cohesion and coherence skills.
- The assessment practices used should be formative and summative. The formative assessment practices should be regular, insightful and guiding. Use of portfolio and assignment could be good practices. The summative assessment practices should work according to a list of criteria and marked by two markers.
- Essay writing teachers should be trained to use different classroom interaction techniques and teaching methods such as pair work and group work, peer-review, student-teacher conferences and any other related techniques. It is also suggested that teachers should be acquainted with using technology in the classroom to help students with different learning styles learn efficiently and rapidly.
- It is suggested that essay writing lecturers should be engaged in conducting research in general and action research in particular where they can find students' weakness areas and try to improve them.

## 6. Future Work

The following suggested studies are areas that need more exploration with the Egyptian context:

- Conducting a study about the effect of different teaching techniques on the development of students' organizational skills in writing.
- Exploring teachers' views about teaching the mechanics of writing in an essay writing course.
- Investigating the role played by different revision and editing strategies on the development of students' organizational skills.
- Analyzing students' vocabulary learning strategies and its effect on the development of coherent and cohesive written essays.
- Investigating the effect of the current classroom interaction techniques on students' attitudes towards essay writing.
- Analyzing the written essays of Egyptian student teachers to investigate the different writing errors in their English writing.
- Exploring the relationship between Egyptian student teachers' performance in essay writing and their teaching practices of writing and composition at different teaching practice schools.
- Investigating teaching essay writing creatively in an Egyptian essay writing course at the university level.
- Investigating teacher feedback practices to understand the factors that hinder good quality teacher feedback on their students' writing.
- Exploring the quality of the current assessment practices in all the English language courses at the English department, Helwan Faculty of Education in Egypt.

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# Innovative Ways to Promote Shared Book Reading

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## Abstract

*The proposed study aims to examine the influence of parent-infant book reading on children's vocabulary development. Given the low engagement of disadvantaged families with early home literacy, the study's objective is to develop and evaluate new methods of promoting parents' involvement by using the widespread ownership and attractiveness of mobile phones together with the current popularity of digital books. Information will be collected about the take-up by parents and any lack of engagement with this technology. Reading techniques used by parents while sharing their own or unfamiliar book will be evaluated in the light of their impact on child's vocabulary growth. It is anticipated the research will be extended to evaluate the value of picture booklets in promoting healthy eating behaviours, and to examine the benefits of books being rotated among individual parents and exchanged between home and pre-school.*

## 1. Introduction

Vocabulary and literacy have been shown to be critical components of children's educational progress. Vocabulary is often seen as providing the essential basis for communicative development [1] and for children's reading [2], while reading ability is fundamental to being able to make gains at school [3]. Recently there has been much concern about the low levels of language ability of children from deprived backgrounds [4]. It has even been reported that these children demonstrate levels of language competence that would be considered as a learning disability [5]. Clearly, the factors influencing the development of language and literacy are complex and multi-faceted, but there also is a substantial body of evidence which indicates there are some areas which are important for the development of these abilities. The evidence suggests that key elements are: (i) motivating carers to make 'learning' a social and enjoyable experience; (ii) increasing and consolidating the child's vocabulary, and (iii) exposure to books in a positive and supportive environment.

One learning situation which appears to provide an especially suitable context for all these activities is shared book reading. Parent-child shared book

reading appears to result in effective language learning [6] and in the development of a number of early literacy skills, including children's awareness of print [7], responsiveness to linguistic or protolinguistic behaviour [8]; modulation of joint attention [9] and children's vocabulary growth [10]. It also aids in a positive parent-child relationship, enhancing the learning experience [11].

Often families from deprived backgrounds will not be motivated to take part in literacy activities and many might not know the best ways to employ the literacy resources that are at their disposal. It is reasonably well established that these families have few books in their homes, the carers tend to be poor readers, and little time is spent in shared book reading [12]. There is a real interest in supporting children from such home literacy environments, given that children participating in home-based initiatives such as Bookstart, the first national book-gifting scheme, have significantly higher performance scores on a range of literacy and numeracy tests [13].

Further to specific literacy gains, the latest research by EPPE- the largest study in Europe on the effects of preschool education on children's cognitive, social and behavioural development - shows that for successful reading development, both decoding skills and vocabulary acquisition are important [14]. In response to the current dilemma of the content and timing of the early years curriculum, the authors call for further research to investigate the ways to support vocabulary development in the pre-school years, especially for disadvantaged and EAL children.

In order to fit the demands of the research calls and policymakers, the proposed project aims to explore ways of supporting early vocabulary development in the context of shared book reading. A further aim of the study is to explore practical, creative ways of making meaningful books in rapidly changing learning environments.

## 2. Procedure

Two local schools will act as vehicles to facilitate access to parents and promote the project. For comparison purposes, pre-schools will be chosen on the basis of socio-economic profiles, with one pre-school from an area classed as disadvantaged. Parents

of two to three year old children will be asked to take pictures via their mobile phones (or if they don't possess any, via digital cameras) of their children's favorite fruit or vegetable in a positive environment. The text accompanying these pictures will be meaningful and personally relevant to the children. It will be up to the parents to decide whether to include other children's favourite foods/objects or story characters in the book. Each booklet will contain the name of the child's favourite fruit/vegetable and the name of one unknown or disliked vegetable, chosen from a list given to parents. For participants from ethnic minority groups, the fruit/vegetable's names will be written in the child's primary language and its English equivalent. Parents will then transfer their pictures and text on a computer (either in their homes or at pre-school) and create short books via a freely downloadable and easy-to-use software. Full support will be offered. Parents with limited PC skills will be able to submit their pictures and text directly to the research team. Upon creation of individual books, parents will be invited to share them with their children and later to exchange them with other families.

In the first stage of the project, information regarding the books' popularity, programme take-up and topics featuring in children's booklets, will be gathered. In the second stage of the project, home observations will be conducted. Here, video data will be collected by parents sharing their own book and an unfamiliar book brought in by the researcher, with their children. In the third stage of the project, focus groups will be consulted. These will consist of parents who show little or no interest in the project. Information on ways to increase and improve their engagement in programmes with a similar research goal will be sought. Finally, children's immediate and subsequent vocabulary gains will be assessed using self-report questionnaires distributed to parents, in combination with a standardised language test and eye-tracking technology.

### 3. Methods

A mixed methods approach will be adopted and will include:

1. Analysis of the video observation data using the Book Sharing Scale [15]; 2, eye-tracking procedure to triangulate outcome measures and 3, content analysis of in-depth interviews with parents (purposive sampling).

The Book Sharing Scale was originally designed to examine the variety of reading strategies parents use when sharing a book with their 10-month-old babies. An adaptation of the scale will be developed for use with individually created books and an older age group. However, core BSS categories will be retained for comparison purposes. Some of the pre-

defined categories which are likely to be retained in the study are:

'Introduction to the book' which assesses the extent to which parent, before starting to read, questions and makes predictions about the story, previews the book (front and back cover, looks at the title, illustrations) and provides a lead into the book by motivating the child, e.g. 'Look at this book! Shall we have a look what's inside?'

'Responding to baby's cues', where parent's ability to respond appropriately to baby's behaviour is scored. For example, if the child squirms, moves restlessly and pushes the book away, the parent would try to calm baby down with rocking or patting on the back but wouldn't insist on reading if the child shows no interest. To get the highest score of 3, the parent would imitate baby's sounds (babbling and cooing) to encourage an early "conversation".

'Reading as cuddle time' which looks at the intimate closeness, emotional warmth and non-verbal communication between the parent and the child. The amount of physical (hugging, kissing, stroking) or verbal affection (calling the child 'my dear', 'honey' etc.) as well as supporting facial expressions (eye contact, raising eyebrows, big smiles) are to be scored.

'Praise' which assesses the degree to which parent praises the baby for his or her effort to become involved in the book sharing activity. Positive feedback should be offered for any attempt the child makes to contribute positively to the activity. For the highest score of 3, the praise is labeled: i.e. parent points out what s/he is praising the child for.

2. The use of eye-tracking technology will allow for a high level of precision in mapping language processing [16] and will, in this study, enable the assessment of vocabulary gains in preverbal infants and children for whom traditional language skills tests are not sensitive enough.

3. Detailed in-depth interviews and one focus group (if available) will be conducted to gain an insight into parents' engagement with reading interventions or reading at home. Issues arising from different cultural, social or emotional conditions will be identified and their relative impacts considered. Parents' perceptions of the nature of the intervention, their experiences of shared reading, storybooks and other relevant issues will generate some qualitative data, which will assist with the modification and improvement of future projects.

### 4. Evaluation

In parallel with the three-step method of data generation, an evaluation analysis will also be conducted at three levels:

- Level 1: observation data analysis using quantitative research methods. Prediction models will be developed using the AMOS statistical

package. The use of path analysis will enable creation of prediction models which account for environmental influences such as ethnicity, birth order, English as a second language, family dynamics (single parent family, relationships with siblings etc.) and their interactions with the book sharing variables. Path analysis is especially useful here as it allows for separating and extracting combined effects of variables which are known to be interwoven in real life [17].

Various facets of parents' reading behaviour- as measured by the BSS scale- will be compared across as well as within participants. Further, differences in parents' engagement, reading behaviour and child's response will be compared across variables such as reading a familiar versus unfamiliar book, reading books with known and unknown vocabulary, favorite versus disliked fruits/ vegetables and reading a book with a personally meaningful content versus one selected by the researcher.

- Level 2: Eye-tracking will be used to determine the attentional focus of nonverbal children and measure fixation times to target words. The data will be compared with parents' questionnaires assessing their children's word comprehension and results obtained from standardised language scales assessing receptive language. As such, eye tracking will allow for a higher degree of ecological validity in task performance. It will also enhance the study research design by testing the validity of the methods used. Of interest will be the investigation of possible relationships between child's word learning ability and specific reading techniques employed by parents while sharing a book.
- Level 3: Data collected through in-depth interviews and focus group will be subjected to a content analysis which will identify main ideas and organize them into categories. The qualitative study will play an essential analytical role in areas where other analytical instruments are not sophisticated enough to identify differences within and between variables, or put in more qualitative terms, to collect a rich set of data on the experiences, perceptions and understandings of parents who are most disinterested in such programmes.

It is expected that the initial stage of evaluation will provide direct feedback to designers of children's books, digital book softwares and mobile phone companies. Further analyses will provide basis for further research and development of literacy programmes for parents and their children. Implications will be discussed with emphasis on parents' role in shared book reading and early vocabulary development.

## 5. Conclusion

Shared book reading is important for the development of vocabulary and early literacy skills. Our findings are likely to be relevant to other research groups in the area of shared book reading as well as parents, practitioners and stakeholders involved in the early education field.

The proposed project is only in its early stages. In summer 2010, a small-scale pilot study will be conducted as part of the author's Master dissertation project. The author welcomes any feedback, comments and discussion of any aspect of this study.

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# Reflective Writing as a Means to Assess Understanding

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## Abstract

*Reflective writing promotes student understanding. It provides opportunity for students to consolidate contradiction between public and private knowledge. To assess understanding an open-ended question about teaching and learning concepts was posed to ten student-teachers; participants submitted a reflective response. Data collected was from reflective writings and response to open-ended survey and exam questions. The study seeks to inquire participants' view of the role of reflective writing/feedback on their learning and the impact of writing on modifying conceptions.*

*The use of reflective writing to assess understanding reflects providing evidence to claims and relating experience to new information, which was missing from their writing. Directions were provided to participants to review their old feedback and consider them, no evidence was found from writing analysis to support this, which indicates no benefit from individual feedback. This created a mismatch between their responses on the survey were they assure such benefit.*

## 1. Introduction

Although the idea of using writing is implemented in European and American schools and widely accepted among teachers and educators, it is not yet fully adopted in Saudi schools. Writing is rarely used to scaffold learning in disciplines other than Language (Arabic) literature; however, at university level, only formal writing is used and merely for formative assessment. Thus, students not only lack the opportunity and the appropriate skills needed for informal writing, but also lack critical thinking.

School teachers view learning as taking information; therefore, their role would be basically delivering information to their students. As consequences their assessment methods would be traditional. Graduate students faced several obstacles with informal writing [1].

## 2. Literature Review

Constructivism as a learning theory although widely accepted, yet its implementation in teaching context differ based upon the view each educator adopt of the theory [2]. Student-centered approach reflects the view of interactive-constructivism where instruction tackles information to allow meaning formation from the learning context.

Reflective writing promotes student understanding through thinking about the topic, recalling previous experiences, and relating ideas to the topic. Such writing will provide opportunity for students to consolidate any contradiction between two types of knowledge: public and private [3]. While the former indicates the knowledge gained from interaction with learning environment, classmates, and instructor; the latter represents the student own ideas of the topic [2], [4]. However, it is very important to assure that to scaffold students' learning via writing, instruction must not merely be lecturing where students are passive listeners, rather instruction must motivate and allow students to express, discuss, and argue their thoughts and ideas [5]. Furthermore, students need enough feedback to ease their mission of consolidating knowledge contradiction while writing and reflecting about their experience.

Constructivist teaching approach and informal writing will promote students' critical thinking [6], [7].

## 3. Research questions

This study inquires about the effectiveness of using reflective writing to assess learning. Specifically, the study seeks answer to the questions:

- how do participants' view the role of reflective writing and feedback on their learning?
- What is the impact of writing on modifying conceptions?

## 4. Research Methodology

This is a pilot study that inquires about the possibility of using reflective writing as a means to



assess understanding; therefore, descriptive qualitative approach was adopted to gather as much as possible information about the implementation of informal writing within graduate level.

#### 4.1. Participants

Ten female student-teachers, enrolled in a 3-credit graduate course "Curriculum Foundations", at the department of curriculum and instruction, college of education, King Saud University during the spring of 2009 participated in this study. Participants had different background knowledge and different teaching experience.

#### 4.2. Method

The study was aimed at tackling participants' understanding of learning and teaching concepts. To facilitate participants' reflective writing, the course which this study was conducted within was taught based on constructivist teaching approach where information was rarely given to students and thorough discussions were conducted along with activities to convey student-centered approach and provide more comfortable learning environment where participants articulate, share and reflect on ideas. The course topics were curriculum concept, philosophical, psychological, social, and knowledge foundations of curriculum. Other topics discussed were few curriculum elements, such as goals and evaluations methods.

As a course requirement, all participants were asked to submit three pieces of reflective writing that reflect their understanding of teaching and learning concepts and other topics discussed within the course. Weekly reading was assigned and thorough group discussions were conducted to tackle participants' existing knowledge and provide opportunity to share ideas and generate meaning.

A comprehensive written feedback was provided individually to each participant's reflective writing. Feedback was mostly focused upon claim(s) of knowledge and the provided evidences. Also, to convey the idea of one-way communication through writing focus also placed upon the role of punctuation marks on the meaning conveyed to the reader. I don't get this last sentence.

#### 4.3. Data source

Two data sources were used to assess participants' understanding of teaching and learning concepts within curriculum foundations elements: 1) Open-ended questions take-home exam; and, 2) open-ended questions survey.

The exam consisted of three questions that were worth 20% of the course grade. The first question inquired whether the participants' were with or

against adding a new subject to middle and high school levels that deals with patriotism education based on the topics discussed through the semester. The question clearly required reasons, rationale, and evidences for the side which a participant advocated.

The second question provided four satirical caricatures from local newspapers about schools and education for participants to comment on.

The third question inquired participants' understanding of the learning theory that supports reflective writing. The question provided a context for informal discussion—that is, a friend was complaining to a participant about the difficulties of writing a report of one of the curriculum foundations, in turn the participant response was wishing that she did not have to write a reflective paper where she had to choose a topic on her own and reflect on, so she was hoping that her instructor had asked her to write a report on a specific topic. Clear directions within the question were provided to all participants to relate their responses to learning theories, evaluation methods, and the concept of learning and teaching. Furthermore, participants were always reminded to provide sufficient evidences within their responses to support their claims.

The survey included open-ended questions that inquire about participants' opinion of reflective writing, feedback provided, the relationship between their writing skills and reflective writing, and any barriers or difficulties that might hindered their writing.

#### 4.4. Research limitation

A limitation to the study might be the lack of using interviews as a data source.

### 5. Results

Analysis of participants' responses within the exam questions indicates understanding. For the first question, regardless of the choice, each participant adopted a view and supported it with evidences within her writing. Their writing not only reflected their understanding of curriculum foundation, but also revealed their background knowledge of the topic of patriotism and differentiated between them. It was clear that a few participants took the chance to search and read about the topic while others depended merely on their background knowledge.

Analysis of the second question also reflected understanding of the concept of curriculum, clearly stated the misconceptions of content with curriculum conveyed among public, and related the role of active learning to student-centered approach.

The third question analysis reflected participants' understanding not only of reflective writing, but also of the topic discussed within the course. While only four participants related their response to learning

theories, seven participants centered their response on understanding, meaning making, and connecting new information to previous knowledge.

An interesting finding was that two participants wrote about writing and its role on communicating information to others and clearly reflected their awareness of it as another goal of such writing.

Although the question clearly indicated to relate the responses to learning theories, evaluation methods, and the concept of learning and teaching, only four participants related their response either to learning theories or to learning concept.

The survey analysis indicated different levels of writing skills. Five participants rated their writing skills as medium level—that is between 4-5 on a 7-level scale with 7 indicating the maximum. While two participants rated their writing between 2-3 levels, three participants rated their writing at the highest level.

Nine participants assured the positive relationship between writing skills and writing a reflective paper and provided evidence of articulating thoughts and the ability to translate them in writing to communicate with others. Only one participant disagreed of such relationship and explained that the writing skills may helped in formal writing to write an essay and/or a speech where choosing words effectively affect the written document.

Analysis of participants' responses regarding their opinion in reflective writing indicated agreement of favoring this type of writing for different reasons. Only two participants indicated that they liked the change and new type of writing. Eight participants indicated that reflective writing provided a chance for them to argue their thoughts, relate new knowledge to everyday life, think critically, and to get feedback on their writing. Two participants indicated their appreciation of allowing them to express their opinions, feelings, and attitudes within their writing.

## 6. Discussion

The use of reflective writing to assess understanding reflects providing evidence to claims and relating experience to new information, which was missing from their response to open-ended exam questions, although directions were provided to participants to review their feedback on reflective writing and consider them. This may indicate no benefit from individual feedback provided on reflective writing. However, analysis of open-ended survey questions reflected different view where participants provided reasons and evidence to support their view. This created a mismatch between their responses on the survey were they assure such benefit.

## 7. Implications

This pilot study provides a thorough view of participants' point of view regarding using reflective writing as a mean to assess their understanding. The research reflected that using writing requires a specific type of classroom direction and may increase learning.

## 8. Future work

The relationship between reflective writing and teaching methods or instructions is still in dire need of investigation. Also, the effect of feedback and the number of reflective writing impact on learning is still in need for further investigation. Finally, setting standards and rubrics to evaluate such type of writing is very important to be investigated.

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## **Session 8:           Cross-disciplinary Areas of Education**

Comparisons and Reflections of Compulsory Education of China's Migrant Workers' Children in Different Types of Schools in W City  
(Ying-xiu Yang)

The Wretched of the City: Sudanese Refugee Children Beating the Odds to get an Education in Nairobi, Kenya  
(Lucy Karanja)

Family and Marriage Counseling and HIV/Aids Pandemic in Nigeria  
(Kalu Christopher Okwun, Saedah Siraj)

E-Learning, Ecology, and an Arts Education Institutional Partnership  
(Rena Uptis, Ann Patteson, Philip C. Abrami)

# Comparisons and Reflections of Compulsory Education of China's Migrant Workers' Children in Different Types of Schools in W City

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## Abstract

*Since the 1990s, the number of migrant workers and their children has been increasing rapidly. Due to this, the Chinese government issued policies and laws, requiring the urban public schools to guarantee migrant workers' children's rights of receiving compulsory education. However, this research shows that the capacity of urban public schools, especially economically developed urban public schools is limited to receive migrant workers' children. Therefore, the phenomenon that the migrant workers' children receive compulsory education at public, private, different types of schools emerges. But in different types of schools, the running conditions are different, which result in different degree of satisfaction of migrant workers' children towards the schools, teachers and performance. Accordingly, this research put forward to solve the problem which may mainly rely on public school education so as to guarantee educational fairness and quality.*

## 1. Introduction

To solve the problem of migrant workers' children receiving compulsory education, the Chinese government in *the decision on basic education reform and development* [1] released the most influential policy, which prescribes that "focus on government management on migration destination, mainly rely on full-time public primary and secondary schools and adopt various forms to guarantee the right of the children of floating population to receive compulsory education". This policy was referred to as the "two importance" policy, and was written into the newly revised *compulsory education law of the People's Republic of China* [2]. But because of rapid increasing number of migrant workers' children [3], urban public schools, especially economically developed urban public schools, have no ability to receive all migrant workers' children entrance. So specialized public schools for migrant workers' children (hereafter referred to as the public migrant workers' children school), specialized private schools for migrant workers' children (hereafter referred to as the private migrant workers' children school) and non-

specialized public schools for migrant workers' children (hereafter referred to as the non-specialized public migrant workers' children school) enforce compulsory education of the migrant workers' children respectively. Public and private migrant workers' children schools' students are all migrant workers' children, while non-specialized public migrant workers' children schools' students are including both migrant workers' children and children of local resident population. So, my research team and I did some surveys through stratified random sampling in economically developed W city, for three types of 4 junior high schools. 594 questionnaires were handed out to migrant workers' children and recycled 587 valid questionnaires. In these questionnaires, 196 questionnaires were handed out to junior high school students of grade 1 and grade 2 in public migrant workers' children schools and recycled 189 valid questionnaires; 248 questionnaires were handed out to junior high school students of grade 1, grade 2 and grade 3 in private migrant workers' children schools and recycled 248 valid questionnaires; 150 questionnaires were handed out to junior high school students of grade 1, grade 2 and grade 3 in non-specialized public migrant workers' children schools and recycled 150 valid questionnaires. The data was analyzed by using SPSS14.0. Questionnaires were designed for 20 closed questions, including 2 multiple choice questions and 18 single choice questions. The content includes four aspects. The first aspect is to understand basic situation of migrant workers' children school entrance in the city, including their school transfer, entrance formalities and their capacity to pay tuition. The second aspect is to understand school situation of migrant workers' children in the city, including the school teaching conditions, teaching levels and funding measures for them, etc. The third aspect is to understand the relationship between teachers and migrant workers' children during the learning process, including their satisfaction to teachers and teachers' care and help to them. The fourth aspect is to understand the learning evaluation and expectation of migrant workers' children, including their own evaluation and expectations for learning and their parents' expectations for their learning. The research shows that migrant workers' children's learning experience and existed problems in different types of school

have similarities and differences, such as different degrees of satisfaction of migrant workers' children towards different types of school running conditions and their own achievements. While the communication scope with their teachers and classmates, where to go after finishing compulsory education show convergent inclination, etc. Through comparison, this research shows that because of better overall level, rapid development and government support of China's public schools, to improve migrant workers' children's compulsory education status should mainly rely on public schools, meanwhile provide appropriate support to private migrant workers' children school.

## **2. Literature Review**

The reason why this research goes deep into the basic situation of migrant workers' children school entrance in the city, basic situation of the schools, the relationship between teachers and migrant workers' children during the learning process, self-evaluation of migrant workers' children and their parents' expectations to them, this research aims to go further into the realistic and potential problems of migrant workers' children receiving education and puts forward the suggestions to solve the problem. However, the previous theory research, policy research and practice research still lack sufficient attention on these problems. In the aspect of theory research, it mainly explores the institutional obstacles which influences migrant workers' children's rights to receive education, such as the household registration system and the school roll management system, and emphasizes on that the government shall adopt measures to ensure they enjoy equal right to receive education as children in the city [4]. In the aspect of policy research, it mainly discusses the evolution of relevant national policies, but gives little concern for the results after the policy was implemented [5]. In the aspect of practice research, it mainly explores the difficulties which migrant workers' children may encounter when they receive education in the city, especially focuses on differences in education conditions between private and public urban schools for migrant workers' children, but does not go deep into the existing problems of different types of schools for migrant workers' children in the learning process [6]. This research is meaningful in relieving, but still lack of dynamic thinking in dealing with new situations in the process of policies and practices changing and does not go deep into the potential problems. This situation will result in strategy lag in solving problems of migrant workers' children receiving education. For example, national policies to solve problems of migrant workers' children receiving education, from putting restrictions on their study in urban schools to protecting their rights to study in

urban schools by law, the value orientation has been changed in essence. In this context, a new situation appears in solving this problem by the government. Therefore, only concerning about education situation in urban private schools for migrant workers' children is not enough, we still need to go to different types of schools for migrant workers' children in person to observe and understand the condition, making comparative studies and comprehensive research. Meanwhile, migrant workers' children receiving compulsory education is a short process, after that, they will continue to stay in the city, and then the problem that they will go on receiving higher education beyond compulsory education phase will soon appear. It requires us to see through the problem in dynamic perspective, do research systematically, and put forward the strategy to solve the problem.

## **3. Analysis of Findings**

### **3.1. Entrance situation of migrant workers' children in the city**

This investigation is mainly relevant to school transfer, entrance formalities and the ability to pay tuition of migrant workers' children, so as to understand the entrance situation of migrant workers' children in the city.

The investigation shows that school transfer rate is higher during the process of migrant workers' children learning in urban schools, which reflect its liquidity characteristics. But from the comparison among these three types of schools, the school transfer rate of non-specialized public migrant workers' children schools is relatively lower than other two types of schools, with 71.8% students have no transferred experience; while the private migrant workers' children schools have the highest rate, with 58.9% students have transferred experience, even 9.7% students have three or more than three times transferred experience (see Table 1). But from the perspective of entrance formalities, private migrant workers' children schools have relatively simple procedure, with 37.6% students think entrance formalities in private migrant workers' children schools are very simple (see Table 2). From the perspective of the capacity to pay tuition, 49.0% students feel having economic problems in non-specialized public migrant workers' children schools, with 34% students feel it very difficult, while 64% students in public migrant workers' children schools and 56.4% students in private migrant workers' children schools have economic difficulties (see Table 3). This shows that non-specialized public migrant workers' children schools cost fewer fees than in the other two types of schools and shoulder less economic pressure.

**Table 1. School transfer of respondents**

Different types of schools	Transferred once		Twice		Three or more than three times		Not transferred	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Public migrant workers' children school	52	27.7%	31	16.5%	18	9.6%	87	46.3%
Private migrant workers' children school	52	21.0%	26	10.5%	24	9.7%	146	58.9%
non-specialized public migrant workers' children school	21	14.1%	16	10.7%	5	3.4%	107	71.8%

**Table 2. Cognition about entrance formalities of respondents**

Different types of schools	Complicated		Not so complicated		Simple	
	Number	Percentage	Number	Percentage	Number	Percentage
Public migrant workers' children school	47	25.3%	99	53.2%	40	21.5%
Private migrant workers' children school	24	12.1%	94	47.5%	78	39.4%
non-specialized public migrant workers' children school	33	22.5%	47	32.0%	67	45.6%

**Table 3. The capacity to pay tuition of respondents**

Different types of schools	Without any difficulty		A little difficult		Very difficult	
	Number	Percentage	Number	Percentage	Number	Percentage
Public migrant workers' children school	61	36.0%	103	60.0%	8	4.0%
Private migrant workers' children school	83	43.7%	96	50.5%	11	5.8%
non-specialized public migrant workers' children school	75	51.0%	61	41.5%	11	7.5%

### 3.2. School situations of migrant workers' children in the city

This investigation is mainly relevant to migrant workers' children's satisfactions to schools, feelings through the comparison between schools in the city and in their hometown and the school funding to migrant workers' children, so as to understand the school situation of migrant workers' children in the city.

First, the investigation shows that migrant workers' children who study in three types of schools have different degrees of satisfaction towards their schools. The degree of satisfaction is the highest in public migrant workers' children schools, with 51.9% students like or like their schools very much; while the degree of satisfaction

is relatively lower in private migrant workers' children schools, with 36.0% students like or like their schools very much and 12.5% students don't like or don't like them very much. The degree of satisfaction in non-specialized public migrant workers' children schools fall in between public and private migrant workers' children schools (see Table 4).

Secondly, in comparison with the schools in their hometown, more than 50% migrant workers' children who study in three types of schools believe that the schools where they study now are much better than schools in their hometown. From the comparison among these three types of schools, 62.4% students in public migrant children schools think that the schools where they study now have better facilities than schools in their hometown and like their schools very much. While, 46.0% students

in private migrant workers' children school and 50.8% students in non-specialized public migrant workers' children schools like their schools. Apparently, public migrant children schools are the most popular one. The notable thing is, 4.8% students in private migrant workers' children schools think that the schools where they study now have poorer facilities than schools in their hometown (see Table 5).

Finally, for the school funding for migrant workers' children, according to the results of the survey, 50% students in public migrant workers' children schools have received grants, clothing, stationery and etc. from the schools. However, only 11.3% students in private migrant workers' children school had school funding and 35% students in non-specialized public migrant workers' children schools had received various funding from their schools (see Table 6, multiple-choice questions).

### **3.3. The relationship between teachers and migrant workers' children**

The relationship between teachers and students is a very important part of this investigation. Because teachers and students spend most time together in school, a good relationship between them will be useful for students' growth and development. Research results show that students in the three types of schools generally like most of their teachers, and approve teacher evaluation. But in private migrant workers' children school, students have lower satisfaction and approval to teachers than in other two types of schools (see Table 7 and Table 8). From the perspective of teachers' care and help to the students, three types of schools' performance are consistent; basically 80% of the students can get teacher's care and help (see Table 9). From the perspective of teacher-student communication, in three types of schools, there have some problems, but non-specialized public migrant workers' children schools have better teacher-student communication than the other two (see Table 10).

### **3.4. Self-evaluation and expectation of migrant workers' children**

The investigation reflects migrant workers' children's self-evaluation from their sense of identity to their learning achievements and their future expectations. Through the interaction with their classmates, they have established a sense of identity, which reflect the unique characteristics of the psychological process of migrant workers' children who study in urban schools. Investigation shows that very few students find their learning achievements satisfactory or very satisfactory, with the majority dissatisfied. Students in public migrant schools have the lowest satisfaction degree among these three

types of schools, with 46% of students dissatisfied or very dissatisfied with their achievements. In private migrant workers' children schools, students' satisfaction is relatively high, with 34.6% students dissatisfied or very dissatisfied (see Table 11). The investigation suggests that students in public migrant workers' children schools have higher satisfaction towards their schools, so they have higher requirement for themselves, and therefore, the satisfaction towards their achievements is relatively lower. However, students' level in private migrant workers' children schools is relatively lower, so they will more easily satisfy. The investigation also shows that the communication of migrant workers' children have the same tendency. About 80 % students choose to make friends with classmates who have same or similar identity (see Table 12), which shows that they have limitations in interpersonal relationships and are still not fully into the city life.

For where to go after graduation, the majority want to receive senior high school education in the city. The learning desire in public schools which receive migrant workers' children is strongest (see Table 13). Because of better teaching conditions in public schools, they have attracted many migrant workers' children who want to go on with their study. The family expectations of migrant workers' children are reflected through their feelings. From Table 14, it can be seen that approximately 80% migrant workers' children can feel their parents' high expectations, and migrant workers' hope that their children can stay in cities and have a brighter future.

## **4. Contribution to Knowledge**

Through the analysis of investigation results get the below achievements, problems and suggestions of migrant workers' children receiving compulsory education.

### **4.1. Achievements**

Ten years ago, it was very difficult for migrant workers' children to receive compulsory education [7]. But these results indicate that the migrant workers' children can receive compulsory education now, which has improved greatly compared with what was ten years ago. It reflects in the following aspects. The first aspect is that the types of schools where migrant workers' children can receive compulsory education are increasing. Both public and private schools work together to assume the implementation of compulsory education for migrant workers' children, and try to solve the problem. The second aspect is that the government and schools are becoming more and more concerned about migrant workers' children. They not only enact laws and policies to guarantee migrant workers' children's rights to receive education as the local students [8],

but also provide them with various schools and funding and help them to overcome the difficulty of their learning. These measures make migrant workers' children satisfied with their schools [9]. The third aspect is that teachers can treat migrant

workers' children equally during the teaching process, make them like the school teachers and improve their interpersonal skills.

**Table 4. The degrees of satisfaction towards their schools of respondents**

Different types of schools	Like it very much		Like		Just so-so		Dislike		Do not like it very much	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Public migrant workers' children school	17	9.0%	81	42.9%	79	41.8%	5	2.6%	7	3.7%
Private migrant workers' children school	13	6.6%	69	34.8%	92	46.0%	13	6.6%	4	6.1%
non-specialized public migrant workers' children school	15	10.1%	59	39.6%	64	46.2%	5	3.4%	6	4.0%

**Table 5. Comparison between the schools where they study now and the schools in their hometown of respondents**

Different types of schools	Not so much differences from the schools in hometown		Have much better facilities, and like it very much		Have much better facilities, but cannot get used to it		Have much poorer facilities and cannot get used to it		Others	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Public migrant workers' children school	36	20.7%	118	67.8%	13	7.5%	3	1.7%	4	2.3%
Private migrant workers' children school	44	24.4%	97	53.9%	24	13.3%	10	5.6%	5	2.8%
non-specialized public migrant workers' children school	40	26.7%	67	44.7%	9	6.0%	4	2.7%	30	20.0%

**Table 6. School funding for respondents**

Different types of schools	Grants		Clothing		Books and stationary		No funding	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Public migrant workers' children school	57	30.2%	23	12.2%	23	12.2%	91	48.1%
Private migrant workers' children school	18	9.0%	0	0	10	5.0%	170	86%
non-specialized public migrant workers' children school	47	32.0%	5	3.4%	6	4.1%	95	64.6%

**Table 7. The degrees of satisfaction towards their teachers of respondents**

Different types of schools	Like all the teachers		Like most of the teachers		Do not like most of the teachers		Do not like the teachers at all	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Public migrant workers' children school	64	34.0%	96	52.0%	25	13.0%	2	1.0%
Private migrant workers' children school	46	23.2%	129	65.2%	18	9.1%	5	2.5%
non-specialized public migrant workers' children school	49	33.3%	78	53.1%	15	10.2%	5	3.4%



**Table 8. The degrees of approval to teacher evaluation of respondents**

Different types of schools	Very satisfied		Satisfied		Just so-so		Do not satisfied		Do not satisfied very much	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Public migrant workers' children school	28	15.0%	81	43.3%	70	37.4%	4	2.1%	4	2.1%
Private migrant workers' children school	15	7.6%	97	48.5%	72	36.4%	7	3.5%	8	4.0%
non-specialized public migrant workers' children school	19	12.9%	44	29.9%	77	52.4%	3	2.0%	4	2.7%

**Table 9. Teachers' care and help to the respondents**

Different types of schools	Usually		Sometimes		Few		Never	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Public migrant workers' children school	59	31.6%	92	48.7%	27	14.4%	9	4.8%
Private migrant workers' children school	69	35.0%	102	50.0%	19	10.0%	9	5.0%
non-specialized public migrant workers' children school	58	39.5%	64	43.5%	17	11.6%	8	5.4%

**Table 10. Communication between respondents and their teachers**

Different types of schools	Usually		Sometimes		Few		Never	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Public migrant workers' children school	28	14.9%	65	34.6%	65	34.6%	30	16%
Private migrant workers' children school	23	11.6%	83	41.7%	69	34.7%	24	12.1%
non-specialized public migrant workers' children school	20	13.7%	66	45.2%	42	28.8%	18	12.3%

**Table 11. Degree of approval to their achievements of respondents**

Different types of schools	Very satisfied		satisfied		Just so-so		Dis- satisfied		Very dissatisfied	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Public migrant workers' children school	1	0.5%	20	10.7%	80	42.8%	67	35.8%	19	10.2%
Private migrant workers' children school	4	2.0%	30	15.1%	101	50.8%	53	26.6%	11	5.5%
non-specialized public migrant workers' children school	7	4.8%	10	6.8%	69	46.9%	53	36.1%	8	5.4%

**Table 12. Interpersonal relationship between the respondents and their classmates**

Different types of schools	Same or similar identity		Different identity		Significant different identity	
	Number	Percentage	Number	Percentage	Number	Percentage
Public migrant workers' children school	168	86.0%	22	12.0%	4	2.0%
Private migrant workers' children school	164	82.0%	27	14.0%	7	4.0%
non-specialized public migrant workers' children school	123	84.2%	15	10.3%	8	5.5%

**Table 13. Expectation for their future after graduation of respondents**

Different types of schools	Go on study in senior high school in the city		Go on study in senior high school in their hometown		Work in the city		Work in their hometown or farming		Others	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Public migrant workers' children school	129	68.6%	44	23.4%	4	2.1%	0	0	11	5.9%
Private migrant workers' children school	149	75.3%	29	14.4%	5	2.5%	2	1.0%	13	6.6%
non-specialized public migrant workers' children school	122	81.9%	13	8.7%	5	3.4%	5	3.4%	4	2.7%

**Table 14. Feelings to family expectation of respondents**

Different types of schools	Very high expectation		High expectation		Low expectation		No expectation	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Public migrant workers' children school	67	35.8%	75	40.1%	42	22.5%	3	1.6%
Private migrant workers' children school	97	49.0%	80	40.4%	16	8.1%	5	2.5%
non-specialized public migrant workers' children school	70	47.6%	57	38.8%	15	10.2%	5	3.4%

## 4.2. Problems

Migrant workers' children receiving compulsory education still exists problems.

The first problem is that there are great differences in school-running conditions among schools where migrant workers' children receive compulsory education; generally speaking, public migrant workers' children schools have better conditions than private migrant workers' children schools. So, students in public migrant workers' children schools have higher satisfactions than students in private migrant workers' children schools. Students in private migrant workers' children schools not only dissatisfied with the poor teaching conditions of their schools, but also the little learning funding. The more notable thing is that they have low satisfaction with their own achievements. It shows that there exists a serious problem about education quality, which is due to the imbalance of education condition. It violates the Education Equity principle [10]. If this problem cannot be solved in time, stratified phenomenon will appear between migrant workers' children in urban private schools and other students in the city. It will lead to the imbalance of education

process, which eventually results in the imbalance of education results [11].

The second problem is that the communication between migrant workers' children and their teachers and classmates is worrying. Migrant workers' children in these three types of schools seldom communicate with their teachers. Little or no communication with their teachers, in a certain extent, reflects the isolation and limitations in migrant workers' children's school life. When their inner world is isolated from the external world, teachers cannot know what they want and need; therefore, teachers cannot help them to solve practical problems in their study and everyday life with a clear aim. Especially in the junior middle school, when students are at physical and mental development stage. If they are not good at expressing themselves, it may cause many problems [12]. On one hand, migrant workers' children are unwilling to communicate with others; on the other hand, they just want to talk with other migrant workers' children who have the same or similar identity. This shows that the scope of migrant workers' children's communication is influenced by existed culture and economic factors. They only communicate with people of same backgrounds, they are not really

melting into city life and school environment, which may have negative influence on their development [13].

The third problem is that migrant workers' children have high expectations about where to go after graduation. They hope to go on study in senior high schools or find a job in the city and their parents also have the same expectations. On one hand, this expectation may stimulate migrant workers' children to strive for their future; on the other hand, it may become great pressure to them. At the same time, the expectation puts forward new demands for urban schools, requiring them to improve their quantity and quality to meet the requirements of migrant workers' children enrollment. But from the present situation in the city, the condition of migrant workers' children receiving compulsory education is imbalanced. To solve this problem, the government need more effort [14].

### 4.3. Suggestions

According to the analysis above, the following advice to the schooling issues of migrant workers' children is given.

Firstly, compulsory education of migrant workers' children should mainly rely on public schools, including those that are specialized for migrant workers' children and those that receive their children. Compared with private schools, public schools have the advantages of government support, efficient funding, better staff and teaching equipment, and proper administration. These conditions could guarantee qualified education for migrant workers' children, which enables them not only a chance of education, but a chance of better education. As for private schools for migrant workers' children, the government could offer proper administration and certain policies. Especially when public schools' number are limited, private schools for migrant workers' children can play its role through being entrusted schooling by the government [15]. To ensure the quality of private school's education, the government should assist the training of teachers, bring up teaching standard, and give their best performance to the students. Private schools that are not good enough are to be disqualified during the process.

Secondly, migrant workers' children should be given more love and care, and get help to fit in with city life and academic atmosphere. When migrant workers' children first come to the city from the country, they undergo differences on culture, education ideas, and economy and so on. They need to adjust to the city life step by step [16]. At school, teachers should take notice of these differences and treat migrant workers' children with respect of their values. Teachers should make an effort to organize activities to create chances for migrant workers' children to build up their confidence. As for the

students with low marks, teachers could teach them personally to help them get higher marks and better self-evaluation.

Thirdly, the government should take measures to face the challenge that migrant workers' children would stay in the city for higher education after middle school. The government should adjust the frame and curriculum of high school education, enlarge the educational resources, and create schooling opportunities for migrant workers' children [17]. Education is a system [18]. The good connection between middle school education and high school education is an educational systematic project that could enhance migrant workers' children's confidence and elevate their overall quality.

## 5. Conclusion

Through the investigation, at present, there are mainly three types of schools in which Chinese migrant workers' children receive compulsory education, namely specialized public schools for migrant workers' children, specialized private schools for migrant workers' children and non-specialized public schools for migrant workers' children. But from the feelings of migrant workers' children and education conditions, the non-specialized public schools for migrant workers' children are much better in improving the quality of education of migrant workers' children. Therefore, to develop public schools, which makes the migrant workers' and urban children study together in the same school, is the best way to solve the problem of migrant workers' children receiving compulsory education.

## 6. Future work

Although the study shows that the non-specialized public migrant workers' children schools are more conducive to improving the education quality, the study also finds that, in this kind of school education, the students have low recognition towards their teachers evaluation, and have significant differences from public migrant workers' children school, significance=0.046 ( $p < 0.05$ ), and have no significant difference from private migrant workers' children school, significance= 0.861 ( $p > 0.05$ ). This shows that students cannot satisfy teachers' evaluation in non-specialized public migrant workers' children school. This study in the interview find that most of the teachers in non-specialized public migrant workers' children school think migrant workers' children are inferior to local urban children in cultural habits, learning base, parents care etc. This feeling will directly affect their approval to migrant workers' children, separate them emotionally. It will affect the migrant workers'

children confidence in them and the approval of teachers' evaluation, even will affect their learning achievements. Future research primarily needs to focus on how to change the situation.

In addition, this study shows no matter what types of schools the migrant workers' children are in, they have strong will to continue receiving education in the city after graduate from junior high school. They did not show the desire of significant differences. On this point, the migrant workers' children who study in non-specialized public migrant workers' children school have no significant differences with the migrant workers' children who study in public migrant workers' children school, significance=0.161 ( $p > 0.05$ ), and have no significant differences with migrant workers' children who study in private migrant workers' children school, significance=0.328 ( $p > 0.05$ ). But it is notable that students in different types of schools have different feelings towards parents' expectations. Students in non-specialized public migrant workers' children school hardly feel their parents' expectation of receiving higher education in the city, and have significant difference from public migrant workers' children school, significance=0.020 ( $p < 0.05$ ), and have no difference from private migrant workers' children school, significance=0.428 ( $p > 0.05$ ). This reflects that there may keep gap between migrant workers' children and the urban local children in learning, especially in schools which partly receive migrant worker's children. Those reasons may result in the low recognition degree towards teachers' evaluation and low feeling degree of parents' expectation of continuing to receive higher education in the city. On the other hand, facing the migrant workers' children's desire to go on study in the city, the government should adopt measures to solve non-compulsory education problems as soon as possible. Otherwise, the problem that migrant workers' children receiving compulsory education will soon be another new question that they receive non-compulsory education. Therefore, to guarantee the compulsory education quality of migrant workers' children and care about further education after graduation is the focus of future research.

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# The Wretched of the City: Sudanese Refugee Children Beating the Odds to get an Education in Nairobi, Kenya

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## Abstract

*The Sudanese refugee children in Nairobi, Kenya, face xenophobia and discriminative urban refugee policies, which preclude their admission into public elementary schools in the city. In turn, these children's enrolment in private schools in Nairobi is hindered by their parents' or guardians' precarious socio-economic status. To enhance educational access for their children, a Sudanese refugee community in Nairobi established a school for their children, despite their economic deprivation. Thus, the current study investigated the educational experiences of the Sudanese refugee children at the Sudanese community school, by probing the multifaceted factors that produce and shape those experiences. The study's findings show that the community school provides many Sudanese children in Nairobi with an opportunity to access education, and a welcoming and secure learning environment. However, poor school conditions and inadequate resources preclude the provision of high quality education. Additionally, the students' deprived livelihoods in the city hamper their achievement to their fullest potential. Collaboration between the UNHCR, Kenyan government, and the urban Sudanese refugee community has the potential to improve these students' learning conditions, and their future lives.*

## 1. Introduction

Kenya has hosted refugees from war-torn African countries for more than four decades. The numbers of refugees seeking asylum in Kenya increased gradually, with a significant increase in 1992 when refugees totaled approximately 427,000 [1]. This number overwhelmed the Kenyan government's capacity to admit and manage refugees, forcing the government to hand over the refugee status determining responsibility to the United Nations High Commissioner for Refugees (UNHCR). In addition, the government introduced an encampment policy, which requires all refugees to reside in the refugee camps until a suitable solution is available for them [2]. Numbers of refugees in Kenya have dropped since 1993 owing to voluntary repatriation

and resettlement. However, there were close to 250,000 refugees in Kenya by 2005, with the Sudanese comprising the second largest refugee population in the country [3].

Inadequate humanitarian assistance and educational opportunities in refugee camps in Kenya have resulted in an increase in the number of refugees leaving the camps and settling in Nairobi, Kenya's capital city. Here, they become known as "urban refugees" [4]. By moving to the city, these refugees hope to improve their livelihoods and find alternative educational settings where their children can have more access and improved quality education. To many of these refugees, their children's education is a means for a promising future, whether in their home countries or for integration in their countries of asylum. Indeed, the refugees view a well-educated population to be critical in rebuilding their countries both economically and socially [5].

This study investigates the educational experiences of urban Sudanese refugee children at a Sudanese community school (hereafter referred to as Baraka school [a pseudonym]), in Nairobi, Kenya. The school was established by a Sudanese community in response to the limited educational opportunities for Sudanese refugee children in public and private schools in Nairobi. A few Kenyan children also attend the school. I propose that the Sudanese community's livelihoods and identities in an urban setting influence their children's educational experiences at Baraka school. Consequently, this study investigated school and home factors that shape Sudanese children's educational experiences.

## 2. Background

Although the UNHCR provides primary education, albeit inadequate, in Kenyan refugee camps, primary education remains inaccessible to many refugee children in Nairobi. While parents' or guardians' "illegal" status and xenophobia prevent the admission of their children into city public schools, their poor economic status makes it difficult to provide adequately for their children's educational needs [6].

Refugee children from all groups face somewhat similar educational access and support challenges in

Nairobi. However, Sudanese children face more barriers in getting adequate support for their education. Somali, Ethiopian, and Congolese refugees are entrepreneurs and have managed to engage in businesses in the informal economy in Nairobi, which makes survival slightly bearable [7]. On the contrary, many Sudanese do not perceive themselves as entrepreneurs. Instead, their priority is to acquire an education, which they view as instrumental to self-development. This has left the Sudanese refugees more vulnerable to economic hardships in the city, limiting the support they provide for their children's education.

Urban refugees in Kenya face deplorable socio-economic conditions and difficult livelihoods [8]. Despite this evidence, little research has focused specifically on the educational needs and experiences of urban refugee children and ways in which their livelihoods in an urban setting shape those experiences. Research on the problems affecting Sudanese refugee children's education is, in particular, lacking not only in African cities but also in western countries of refugee resettlement including the U.S.A., Australia, and the UK. In Africa, Moro's [9] and Grabska's [10] studies in Cairo, Egypt, are examples of the few studies that have examined educational issues of Sudanese refugee children in relation to their parents' or guardians' legal and socio-economic status and survival mechanisms. These studies revealed that lack of legal documents and economic hardships of Sudanese refugees were the biggest obstacles to enrolling and maintaining their children in schools.

Challenges that Sudanese students face in their schooling in the U.S.A, Australia, and the UK have been documented [11, 12, 13]. These studies underscore the importance of nurturing school environments and parental support in promoting the academic well-being of Sudanese refugee children. In the Kenyan context, issues pertaining to the education of Sudanese refugee children in Nairobi have been reported as vignettes amidst information on other services essential to refugees [14]. This has prevented an in-depth exploration of the concerns facing the education of urban refugee children. Thus, there is a need for more studies into the educational challenges and needs of Sudanese and other refugee children to enable the development of responses and interventions to their problems.

Urban refugees establish self-help schools for their children when faced with limited opportunities or difficulties in enrolling their children into public or private schools. Sudanese refugees have, particularly, been found to actively find educational solutions in urban spaces, especially through creating their own schools in which to educate their children [15]. Thus, this study focused on Baraka school, which is a self-help Sudanese school in Nairobi. The main aim of this study was to acquire a deeper

understanding of the educational needs and experiences of the urban Sudanese children, as they have been influenced by their school conditions and livelihoods in Nairobi.

## 2.1. Guiding questions and objectives

The following key question guided this research: What are the educational experiences of urban Sudanese refugee children at Baraka school in Nairobi? Probing questions that teased out the various factors affecting the children's education included: What is the role of Baraka school in the lives of urban Sudanese refugee children in Nairobi? What is the nature of education at Baraka school? How do the livelihoods of the Sudanese refugee children in Nairobi influence their educational experiences?

This study's objectives were to:

- Describe Baraka school's conditions and resources and examine ways in which they promote or hinder effective learning by the Sudanese refugee children.
- Examine the children's home situations and their implications for their education.
- Determine the educational needs and challenges of Sudanese refugee children and suggest sustainable school-based interventions and strategies for improving their conditions in Nairobi.

## 3. The Research

The following sub-sections provide an overview of this study's investigational framework including theories and methods. The study's findings are also discussed.

### 3.1. Theoretical frameworks

This research is grounded in two complementary theoretical frameworks, namely, critical education theories and postcolonial theories. These theories critically examine ways in which power plays out in social and institutional contexts to oppress the *other*, resulting in inequalities and injustices for such groups. Based on the premise that the urban Sudanese refugee children are an oppressed and marginalized group, critical education theoretical views [16] were useful in examining the multidimensional issues facing the education of Sudanese refugee children not only from the internal politics of schooling, but also from the wider social and historical positioning of schooling.

With a focus on challenging and resisting dominant views that entrench (post)colonial ideas, coding, and rigid views of the *other*, postcolonial theory [17] was useful in revealing the hegemonic, essentialist, and stereotypical views of the UNHCR, Kenyan government and the local community towards the Sudanese refugees in Nairobi. As is a

common practice in many refugee-hosting countries, the UNHCR and the Kenyan government constructed and produced the urban Sudanese refugees in this study as “marginal and lacking”, and held the popular perception of urban refugees as passive, dependent, and economic burdens to the host country [18]. These perceptions result in discriminative urban refugee policies, which deny urban refugees their rights to various social services, including education for their children. Because these refugees are prevented from securing jobs and obtaining work permits, they persist in poverty, resulting in impoverished school and home conditions for their children.

### **3.2. Methodology and methods**

This research employed qualitative methods for data collection and analysis. The guiding qualitative principles, data sources, collection strategies, and analysis are explained below.

#### **3.2.1. Ethnographic case study**

This study is situated within the qualitative interpretive philosophy, which emphasizes the understanding and interpretation of people’s meanings of their actions within the system of meaning to which those actions belong [19]. Thus, this study utilizes ethnographic case study methodology and methods as appropriate approaches that provide access to the meanings that guide the participants’ behavior [20]. Additionally, the ethnographic case study approaches allowed me as the researcher to investigate and attain some understanding and provide rich descriptions of the Sudanese refugee children’s identities, beliefs, values, and attitudes, and their unique educational experiences at Baraka school.

#### **3.2.2. Participants**

Eighteen participants were interviewed including 11 students, 2 teachers, 1 parent, 3 guardians, and a UNHCR representative. Because only the student participants’ information will be reported in this paper, I will not provide other participants’ information. Student interviewees included four females and seven males between 14 to 20 years old and in elementary grades six, seven, and eight. Apart from one female student who was born at the refugee camp, the other students moved to the camp between ages 4 and 14. All but one male student left the Sudan without their families while the female students went to the refugee camp in the company of relatives.

The students stayed at a refugee camp for a period ranging from one to 11 years, where they attended primary schools at various grades. Except the student who was born at the refugee camp, all the others attended school sporadically owing to inadequate educational opportunities at the camp,

lack of documentation at the camp, frequent movements from the refugee camp to other countries or parts of Kenya en route to Nairobi, and lack of accommodation once outside the refugee camp. Ten of the 11 students interviewed were old for their grade levels, and, indeed, elementary school, which is an indication of disrupted education and gaps in their schooling as they transited from the Sudan to Nairobi. By the time of our interviews, these students had been attending Baraka school for an average of 1½ years.

#### **3.2.3. Data collection and analysis**

Consistent with the ethnographic case study approaches, I stayed at Baraka school for four months and collected data through multiple methods namely; semi-structured interviews, participant observation, and document analysis. Each student was interviewed in one session lasting between 30 to 60 minutes. All interviews took place over several Saturdays at the school, as many of the students attend school on Saturdays for private or group studying. The interviews were audio-taped and field notes were taken.

Initially, data were analyzed thematically following Lincoln and Guba’s [21] three analytical steps namely; unitizing textual data into idea units, coding categories, and integrating categories. This process resulted in six overarching themes. Further data analysis using relevant literature and discussion reduced the themes to four: Students’ positive school experiences; Education at the school; Students’ challenges; and Support challenges.

### **3.3. Results**

This study’s findings show that the educational experiences of urban Sudanese refugee children comprised challenges and opportunities. The students’ positive school experiences, school- and home-related shortcomings, and lack of adequate support are discussed here.

#### **3.3.1. Positive school experiences**

Student participants unanimously described Baraka school and its general atmosphere as positively impacting their social and educational lives. The school provided these students with an opportunity to get an education and was affordable to them. They were also admitted to the school regardless of their age or even physical traits, such as height, or despite their legal status or their parents’ or guardians’ status in the city.

Baraka school also acted as a safety net for the students, offering them a sense of security and belonging. The students expressed a sense of safety in being among other students, and some teachers, with whom they shared the same culture and language. A shared language between the students and some teachers not only fostered communication



among them but also facilitated learning course content. The use of students' native languages also allowed parents and guardians to attend school conferences and, using their native languages with translation, discuss school matters, and advise their children regarding good behaviors and study practices.

At Baraka school, the students' needs and shortcomings were understood and accommodated by the school administration. Students were not sent home for wearing non-uniforms to school, failing to pay school fees on time, or for lack of required school supplies. Instead, the school made attempts at supporting the students by allowing them time to pay school fees, and buying a few text books that students could borrow to use at home. Cognizant of the difficulties that these students had in securing basic needs, the school also provided lunch everyday to the students.

### **3.3.2. Education at Baraka school**

This theme related to the kind of curriculum and pedagogical strategies employed at the school. Student participants in this study praised the Kenyan curriculum of education used at Baraka school. They expressed satisfaction that the curriculum—its content and range of subjects— was not only meeting the present educational needs of the students but would enable them to meet their future goals. However, a further analysis of these participants' views using critical education theories and literature on curriculum relevance revealed that the curriculum used at Baraka school fell short of meeting present and future needs of the Sudanese refugee children adequately. This curriculum lacks components that would address the special needs of refugee children such as psychosocial needs and practical knowledge and survival skills, which are necessary for children suffering the effects of war and displacement.

Regarding teaching and learning procedures at the school, I observed that to a large extent, teachers used whole-class, teacher-centered methods, with minimal teacher-students and student-student interactions. Consequently, students learned mainly through rote memorization, and their creativity and critical thought were stifled.

### **3.3.3. Challenges faced by Baraka school students**

Despite the general atmosphere at Baraka school being supportive of students' learning, the students identified the school's location next to a main road and landfill as exposing them to possible safety and health risks, respectively. Additionally, the school structures, which are made of iron sheeting, made the classrooms to be very hot during hot weather and cold in cold weather. These extreme conditions made the students uncomfortable in the classrooms, adversely effecting their concentration. Other problems included a shortage of teachers,

educational facilities such as textbooks and a library, and extra-curricular facilities such as sports and games equipment, which affected the students' learning.

Living in the city without adequate and stable provision presented the students with difficulties. While some students lived with close relatives, others, especially the males, lived with other students, or with guardians with whom they were not related. The students reported that they relied on their parents, other relatives or friends in Sudan, Kenya or in western countries for provision of basic needs and school fees and supplies. Such provision was not always guaranteed even for students who lived with parents, due to the precarious economic situations of their benefactors, whether in Nairobi, back in the Sudan, or in western countries. Consequently, students reported that they were constantly anxious over how to obtain school fees and other supplies, rent money, and even food and shelter. For some, this anxiety impacted on their concentration on their school work. Because of financial strain, almost all the student interviewees indicated that they walked long distances to and from school, leaving them tired through the day and when they returned home. From the students' reports, these problems affected their school attendance; some attended school irregularly due to lack of provision of one kind or other.

### **3.3.4. Support challenges**

Interview data from student participants revealed that the Sudanese community supported the Sudanese children's education partially, providing mainly advice, school fees and other supplies, and needs at home such as accommodation and food, albeit with difficulties. Refugee-ship and urban living complicated livelihoods for the Sudanese refugee community in this study, presenting challenges in their efforts to support their children's education at Baraka school. Unemployment in the city prevented parents and guardians of the students from paying for school improvements such as better structures and facilities or even re-locating the school to a more secure site. Many of the parents and guardians struggled to support their children's education single-handedly, some of them as single mothers with husbands either deceased or back in the Sudan with little or no support for the families in Nairobi. For example, two student interviewees indicated that they lived with their mothers in Nairobi while their fathers were in the Sudan, with little support and communication from them. Generally, students expressed a sense of helplessness regarding obtaining adequate support for their education.

Student participants stated that the responsibility of making major school improvements—better buildings, library facilities, and equipment for extra-

curricular activities—rested with a donor organization that provides funds towards the school's operating budget. Although the donor organization continually provided funds for minor school improvements and repairs, other more costly developments in the school had not been addressed due to lack of funds. Hence, the school's poor conditions and inadequate resources have persisted.

#### **4. Discussion and Implications**

The problems facing the education of urban Sudanese refugee children in this study will have negative influence on their future survival, that of their communities, and their host country, Kenya. Consequently, I suggest ways of mitigating these problems in order to improve the students' educational experiences.

##### **4.1. Enriched educational curriculum**

The Kenyan curriculum of education utilized at Baraka school is academic-oriented, with little emphasis on practical knowledge and survival skills that are critical for the survival of urban Sudanese refugee children. In order to make the curriculum relevant to these children's needs, it should be enriched with knowledge, skills, and messages that will facilitate current and future functioning and survival of these children. The school can provide students with practical knowledge and skills through basic vocational training in areas such as agriculture, carpentry, tailoring, and other skills in family studies, which students who cannot afford to continue their education can use to earn a living. Adding other life skills and values education through programs such as health and nutrition, peace education, human rights, and environmental awareness would enrich the students' lives while at school and the lives of their community members thereafter.

Accommodating the teaching of these skills and messages into the teaching of normal subjects can be difficult, especially given resource and teacher constraints, and an overloaded curriculum. However, the school can set aside time after school, during school holidays and study circles to teach these knowledge and skills [22].

##### **4.2. Improved pedagogical practices**

The predominantly traditional teaching styles used by teachers at Baraka school resulted in banking education, which critical education theorists have criticized for disempowering students. Such an education not only prevents students' active participation in their learning but also presents a limited view of education's transformative potential through the denial of critical thinking skills, which are essential for the improvement of the students' academic and future lives.

Because different students have varied learning styles, teachers should present information in a variety of modes in order to meet the multiple learning styles of students in the classroom [23]. Effective instructional strategies are essential for the urban Sudanese students' current and lifelong successful learning. Consequently the following improved methods are suggested: (i) use of visual aids and experiential learning. These include low- or no-cost teaching aids such as pictures/images, diagrams, maps, and charts; (ii) cooperative learning to include pair and small group activities; (iii) peer tutoring, which may involve one-on-one tutoring, class-wide reciprocal peer tutoring, or cross-age tutoring [24]; (iv) authentic teacher-student discourse including authentic teacher questions, and dialogic instructional discourses such as whole class discussions and activities, student demonstrations, journals, and learning logs [25].

##### **4.3. Improved educational support**

Improved educational support for the Sudanese refugee children at Baraka school has the potential to not only enhance their academic achievements, but also to produce well-adjusted people who are ready to take up their responsibilities in Sudan, in Kenya, or wherever they may choose to live. Failing to adequately support the education of these refugee children will hamper their future plans and make them a burden to the struggling Kenyan economy. Hence, several suggestions might help to better meet the educational needs of the refugee children in this study better. The Kenyan government should provide financial support to Baraka school proportional to the number of Kenyan students enrolled at the school. Also, the UNHCR should take more responsibility in supporting Baraka school, especially because it serves refugee children. Additionally, the urban Sudanese refugee community should organize a lobby group that would petition the Kenyan government for funds that are available to public schools in Nairobi. Finally, the refugee community can organize fundraisers towards identified school projects such as buying text books and providing equipment for extra-curricular activities.

#### **5. Conclusion**

The urban Sudanese refugee children in this study are getting educated under impoverished conditions. These conditions have resulted in low quality education, which may be of questionable effectiveness in facilitating these children's pursuit of higher education and building careers for which they aspire. These children have to be educated effectively to enable them re-build their country, or make positive contributions in any other country where they may settle. Hence, collaborative efforts of all stakeholders in the education of these children

are critical in providing an education that liberates them from socio-economic and political oppression.

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# Family and Marriage Counseling and HIV/Aids Pandemic in Nigeria

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## Abstract

*The success of retrovirus therapy has prompted many of the infected HIV/AIDS serodiscordant couples to now live healthier lives and pursuing a wider range of activities. Many HIV/AIDS infected women today can participate in having their babies, with a significant chance of living to see their children grow into adulthood without infection. Based on the foregoing, the authors carried out qualitative interview research to determine the child bearing desires of serogative couple. Study findings show that two thirds of the interviewed women have high desires to have babies despite having full knowledge of their health condition. The authors conclude that collaborative partnership between family planning and HIV/AIDS services and HIV counseling as part of the integrated system will provide early intervention services to provide relief of anxiety about reproduction in an HIV infected woman to reduce HIV transmission and marriage breakup.*

## 1. Introduction

The HIV/AIDS infected couples consequent upon the introduction of the anti-retrovirus drugs and counseling, can now have a higher quality of life despite the infection. Hence marriage and family counseling gives credence to the success of any family relationship. Marriage is a social institution that is designed among other things to ensure the happiness and fulfillment of men and women who contract into it.

Among Nigerians, marriage enjoys a high level of significance. This is particularly so as much respect and regard are accorded those that are married. In traditional settings as well, especially among rural communities, being married confers on individuals,

the right to participate freely in various ceremonies, in addition to complete and uninhibited self-expression. As Atado [1] concludes, marriage in African traditional society is viewed as the natural consummation of the relationship between two extended families concretized in the spouses and biding on them.

## 2. Background

Marriage according to Olusanya [2] is a sacred and permanent contract between a man and a woman who have consented to live a life of fidelity and caring for each other for the purpose of promoting their mutual growth and welfare throughout their lives. The institution is however, not without its problems, as Kehinde [3] puts it, marriage is like a house while new, it sparkles with fresh smell, with lots of surprises, romance and new discoveries about those involved which makes each day exciting to both partners but experiences have shown that not long after a family is established both partners become major sources of individual problems.

The fact that two people consent to live together as husband and wife implies different hopes and expectations, some of which might be fulfilled while others remain unfulfilled. Unfulfilled expectations and hope in marriage often give rise to maladjustments and unless the couples concerned face the reality of any given situation, conflicts might abound in such relationships. However, it is often inevitable that individuals involved in marriage relationship will experience conflict as Justin [4] puts it "Conflicts is seen as a situation whereby a husband and wife desire goals which may be perceived as attainable by one but not by both". In such situations, the characteristic of the family reflects incompatibility, interactive struggle and

interference. To buttress this, Gangle and Camine [4] postulated that conflict is associated with anger, criticism and struggles, adversity, tension, battle, fight, trouble, challenge, pressure and warfare. Hauck [5] opined that when there are differences in opinion, undefined roles and choices of goals, these are fertile grounds for conflicts. If such conflict is not resolved at the initial stage it may cause separation and divorce. Arising out of concern for those expressed fears, Collins [6] stated that couples need to learn how to negotiate marital conflicts because they arise in families at critical developmental periods. The dynamics of marriage institutions is a subject of continuing interest to the counsellors.

### **3. Couples and HIV/AIDS**

In Africa and Nigeria in particular pregnancy is considered a means of redeeming a woman's relationship with her husband and of protecting her against the risk of rejection and abandonment and of maintaining recognized status as a wife and mother. In case of HIV/AIDS epidemic, it is critical that a new strategic plan for HIV discordant couples is given extensive counseling on the use of reproductive technologies such as donor sperm and insemination. It is common that women who have had history of an HIV infection are often left with guilt, fears and unresolved grief, which affects their psychology, motivation and readiness for sex. However, increasingly safe sexual behavior among HIV-infected individuals has become a priority for the Centre of Disease Control (CDC) of Nigeria whose goal is to reduce new HIV infection. An important component of this new strategic plan for HIV infected individuals is the incorporation of HIV prevention counseling into routine medical care of HIV-infected persons. Relationship-based risk reduction intervention encourages collaboration to address mutual needs. They also enable couples to gain a more realistic appraisal of their risk for HIV as a couple. The question here is should partner notification of HIV precipitate the breakup of relationships? However, it may cause notified individuals to abuse their partners emotionally or physically. In Nigeria, many churches insist on necessity of HIV screening before each wedding. Despite all these measures, the rate of HIV infection among couple continues to increase. The question is what should be done to maintain peaceful live in a situation where the man or woman has HIV. Specifically, the study raises the following questions: Would the couples exposed to HIV/AIDS show greater reduction in marital conflict than those not affected? and what would be the relative effectiveness of family Cognitive Restructuring to the

spouse? These questions are the basis of this article and underscore the importance of counseling to facilitate informed decision-making on childbearing. .

### **4. Statement of the problem**

Recent studies have shown that many infected HIV couples desire and expect to have children. This has important implications for the prevention of mother to child transmission of HIV. The Risk of HIV transmission among individuals is likely to increase more. Infected individuals choose to have children with their HIV-serogative partners. It is certainly necessary to support these individuals without sacrificing the health and well-being of their new born.

### **5. Purpose of the study**

There is no national demographic survey for the purpose of examining the impact of HIV/AIDS on trends in reproductive behavior of infected Nigerians. This work will provide an insight into such trends in Nigeria.

### **6. Research methodology and respondent**

This study was carried out in Aba, Abia state Nigeria with the purpose to improve the quality of life of married couples especially of HIV couples. It consists of providing family and marriage counseling services to married people using a variety of qualitative research approaches including Semi-structured interviews and short questionnaires.

### **7. Population and Sample**

The population of the study comprised 46 couples in a reproductive health counseling program in Aba, Abia State. They were selected for interviews by convenience sampling. Mean age of respondent is 32 years (range 24-40 years). The sample was derived only from those who came for counseling. The sampling technique employed was purposive sampling because specific situation was being addressed. All subjects first volunteered and were later selected using their responses in the semi-structured interviews and short questionnaire. The sample was drawn from those who score 40 and below on the Marital Happiness Scale (MHS), 44-81 on the Irrational Value Scale (IVC) and 74 or less on the Marital Communication Rating (MCRC). 90% were able to explain HIV/AIDS/STI infections, the mode of HIV/AIDS spread and preventive measures, 30% can use condom properly. 90% of the women want the children with/without HIV/AIDS infections,

50% of the men want to have children - that is to have large family, 76% had secondary school education and above.

The rising incidence of divorce, separation and HIV/AIDS has led to a social economic and reproductive health concerns that demands for counseling services. The results will help re-design on-going AIDS patient care and address the issue of reproductive health and new hope for people living with HIV/AIDS and childbirth was not real to many PLWAS and the non-infected but their opinions changed after being told that it is possible to have children even after infection.

## 8. Discussion

To many Africans and Nigerians in particular believe that a marriage which remains for a long time without a child has lost its meaning and thus, for them the marriage is not perfect without children. Since children are wanted to continue the lineage of family history. In most societies childless couples are not considered as truly married until the arrival of their first child, this is because in the traditional African society, a woman is truly accepted by her in-laws only after she has given birth to a child and especially if the child is male. Nwobi [7] asserts that inclination to damage another person self image in the case of the husband and wife may be developed when a couple becomes aggrieved by a dent created on the image of the family by the bad behavior of one of them. For instance: Cognitive Restructuring involves instructing spouses to reduce their negative emotional reaction by getting them to interpret situations with greater accuracy. Ideally, it involves going married individuals avoid bad thinking instead to think objectively. The consensus in the study shows that HIV positive individuals does not have any negative or positive impact on fertility .Most women often learn of their status through antenatal unit after they are pregnant.

During counseling, couples are exposed to training and are being helped by the counsellors to rethink their belief system and avoid the ones that have negative impact on their minds. Corey [8] speculated that HIV/AIDS might contribute significantly to the transformation of reproductive group of people in Africa. However, it is very hard to design empirical studies to validate Caldwell's views as it seems particularly in Nigeria with a prevalence of roughly 5 percent.

### Results 1

The response to HIV/AIDS among the non-infected are assessed below by considering in turn,

possible effects on fertility desires, sexual exposures, contraceptive behavior and post-partum behaviors .

An in-depth qualitative study to determine the extent to which awareness of HIV/AIDS has affected child-bearing and awareness created in the field of counseling.

### Result 2

Survey data from rural Ngwa area provide a more quantitative evidence, hence buttressing a conscious increase in fertility desires in response to the AIDS pandemic. One half of the respondents when asked directly expressed their desire to have fewer children because of AIDS. This is a self assessment from a cross-sectional observation of changing fertility desires.

## 9. Effect on union formation and dissolutions

One of the main issues on the AIDS pandemic on reproductive behavior in Nigeria is related to the possible effect on union formation and dissolutions. From the cross sectional surveys and data analysis of Nigeria the results indicate an increase in the rate of divorce, reflecting unwillingness to be unfaithful to their spouses. A trend towards sexual activity within marital unions to avoid and reduce HIV/AIDS could not be analyzed due to lack of data. For this, Ulo [9] holds that the net impact on fertility should be discussed separately.

## 10. Implications for counseling

The HIV counseling is a confidential dialogue between a client and a counselor aimed at enabling the client to cope with stress and take the necessary personal decisions related to HIV/AIDS. The counseling process includes evaluating the personal risk of HIV- transmission, and discussing how to prevent infection. It concentrates specifically on emotional and social issues related to possible or actual infection with HIV and to AIDS. With the consent of the client, counseling can be extended to spouses, sex partners and relatives (family-level counseling, based on shared confidentiality).

It is worthy of note that HIV counseling has as its objectives both prevention and care. A counselor is a trained professional in psychology to assist the client solve his/her problems. The counselor listens to the client, ask supportive questions, discuss options, encourage the client to make his own informed decision, giving practical information and suggesting follow-up.

Ideally, counseling is a process that involves many

sessions and follow-up. Any location that offers peace and confidentiality is appropriate. It could be a clinic-based counseling that involves a formal session as is tenable in a hospital, health center or clinic by a trained professional, such as a doctor, social worker, nurse or a psychologist. Invariably, it could be Community-based that is counseling given in a non-formal environment. For instance, in a village or urban neighborhood by one community trained in counseling to another community or family member (UNIADS,[10]).

### **11. Pre-test counseling**

It is expedient to note that HIV counseling is often given a voluntary HIV test. Such counseling helps to prepare the client for the test, explains the implications of knowing that one is or is not infected with HIV, and facilitates discussion on ways to cope with knowing one's HIV status. It involves discussion of sexuality, relationships, possible sex and drug-related risk behaviors, and how to prevent infection. It assists to correct misinformation. Pre-test counseling should be accessed to those who want it and for voluntary HIV test. The writers suggest that consent is always required before HIV test where the individual will be linked to the result. This will help to reduce fear while waiting the test result.

### **12. Post-test counseling**

The post-test counseling helps the counselee to adjust based on the outcome of the result on HIV test. The counselor prepares the mind of the client for the result, give the result and provides the client with information required or make referral where and when necessary. If the test result is positive, the counselor should tell the client clearly, and as gently and humbly as possible, providing emotional support and discussing with the client how best to cope. Ongoing counseling will help clients accept their HIV status, and take a positive attitude to their lives. Through ongoing counseling, the infected person may choose to confide in a trusted member of the family hence enabling the family to start practicing family-level counseling.

However, counseling is still accountable though it provided a negative result since it is a common in Asia especially Malaysia to stigmatize patient with HIV. While the client is likely to feel relief, the counseling should emphasize on some points as follows the first, the need to consider returning to

repeat test after 3-6 months. The second, counselors need to involve and discuss HIV preventions; and the third provide encouragement to help the client to adopt and sustain any types of safer practices among others.

### **13. Conclusion**

Fertility desires are driven by some social and economic considerations that are surprisingly robust in encountering AIDS pandemic.

It is widely known that economic costs of how HIV children are being maintained is enormous that is not enough valid reason of curtailing reproduction in our society. Some educated couples reason that many children and poverty increases the likelihood of acquiring AIDS, hence they see the argument about HIV/AIDS as a strategy for restricting fertility. However, this is self assessment from a cross sectional survey.

With the exception of studies by Lyons [11] there are few investigations qualitative and quantitative of the extent to which awareness of HIV/AIDS has changed childbearing aspirations. There is a need for further research on the ways in which consciousness of AIDS pandemic is or is not transforming reproductive strategies.

All hands should be on deck not only to allay the fear that is confronting the HIV patient but also do away with the pandemic. According to the Joint United Nations Program on (HIV/AIDS) in 2007, between 30.6 and 36.1 million people are believed to live with HIV, and it killed an estimated 2.1 million people that year, including 330,000 children. There were 2.5 million infections. Sub-Saharan Africa remains by far the worst-affected region, with an estimated 21.6 to 27.4 million people currently living with HIV. South-East Asia are second-worst affected with 15% of the totality accounts for the deaths of 500,000 children in this region. South Africa has the largest number of HIV patients in the world followed by Nigeria. India has an estimated 2.5 million infections (0.23% of population), making India the country with the third largest population of HIV patients. In the 35 African nations with the highest prevalence, average life expectancy is 48.3years less than it would be without the disease. However, with the introduction of anti-retrovirus drugs married couples can still live longer, enjoy their marriage and procreate children who will not be affected with the pandemic.

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# E-Learning, Ecology, and an Arts Education Institutional Partnership

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## Abstract

*In this paper we outline how an electronic portfolio (ePEARL) was used by a Grade 5 class in an elementary school in Toronto, Ontario to support learning about energy conservation. Students explored solar power and wind turbine energy and presented their learning through the medium of dance as part of a long-term and ongoing program of The Royal Conservatory called Learning through the Arts (LTTA). The ePEARL tool allowed the students to create video archives of their work, as well as to critique one another's work and for the teacher, artist, and parents to add comments to the portfolios. Based on classroom observations and individual interviews, students involved in this two-month project expressed enthusiasm for the tool and demonstrated growth in understanding of how to improve their goal setting and to apply learning strategies in general.*

## 1. Introduction

We are only beginning to understand the devastating effects of global climate change. But even as the general public is becoming more aware of issues related to climate change, many of us still fail to link our own attitudes and actions to the global changes we are causing.

Our planet is undergoing human-induced changes at an unprecedented rate. Each year, we destroy over 17 million hectares of tropical rainforests—an area larger than the country of Switzerland [1]. The Intergovernmental Panel on Climate Change has stated that warming of the climate system is undeniable, as evidenced by increases in global air and ocean temperatures, the widespread melting of snow and ice, and rising sea levels [2]. With this climate change has come the loss of biodiversity on a scale equivalent to a mass extinction event. Unsustainable use of energy is also a crucial concern [3], [4].

Striking as these numbers are, they remain fundamentally incomprehensible to most people. Bateson [5] has written about this kind of incomprehensibility, describing how we pay attention only to a small portion of the information

we receive, blocking out what is in the periphery of our vision. If Bateson is right, learning facts like those just cited will not shape the thoughts and actions of students. Instead, students must reach a metacognitive level of understanding about the effects of their actions. Such deep learning needs to be scaffolded through interactions with the environment and with other people, and can also be supported with learning tools, such as electronic portfolios that provide multimedia structures to support self-regulated learning. Accordingly, the research reported in the present paper was designed to determine the extent to which students, their teacher, and a collaborating artist, might gain knowledge about energy conservation through art-making, supported by the use of electronic portfolios.

## 2. Theoretical Frameworks

Schooling too often disengages learners, focusing more on knowledge transmission rather than encouraging honest self-assessment and engagement. As a consequence, the accumulated evidence on student learning has led to recommendations focusing on increasing student activity, meaningfulness, and self-regulation, including the development of strategies for lifelong learning [6], [7]. While students need to develop essential curricular competencies, they also need to learn how to learn, honing strategies for developing understanding in a world where knowledge—on topics as complex as climate change—is increasingly dynamic. Electronic portfolios can support students in helping them become more self-regulated in their learning.

### 2.1. Electronic portfolios and ePEARL

An electronic portfolio is a digital container capable of storing and organizing visual and auditory content. Some electronic portfolios are also designed to support a variety of learning processes [8]. Since they are often web-based, they can provide remote access, making it easier for peers, parents, teachers, and other educators to provide input. Research has demonstrated that when students use portfolios, they

assume more responsibility for their learning, better understand their strengths and limitations, and learn to set goals [9], [10], [11].

The electronic portfolio used in the present research, ePEARL, focuses on encouraging the development of student self-regulation. In ePEARL, students set goals, plan strategies, store versions of work, create reflections, and obtain peer, teacher, and parent feedback. Students can store audio recordings of their readings, and collect video images as well as written work. Recent empirical evidence [12] indicates that use of ePEARL promotes literacy skills and higher levels of self-regulated learning, such as setting process goals and developing learning strategies.

## **2.2. Metacognition and the arts**

Metacognition, the extent to which a person recognizes how to enhance their learning by consciously choosing effective strategies, is a marker of the degree of self-regulation involved in the learning process [13], [14]. A recent study in two American high schools led to the identification of ‘habits of mind’ associated with studio art-making, including such self-regulatory behaviours as reflecting, persisting, and envisioning [15]. In our research, we borrow the notion of habits of mind with the idea of examining how these habits of mind might apply to other domains—in this case, to issues of energy conservation.

Other researchers have also demonstrated how the pursuit of the arts, guided by teachers well versed in self-regulatory practices, can support the development of students’ self-regulation in arts education and beyond. Baum, Owen, and Oreck [16] determined that self-regulation in the arts includes paying attention, using feedback effectively, problem-solving in a curricular context, self-initiating, asking questions, taking risks, cooperating, persevering, and setting goals. However, these researchers found that some students who demonstrated self-regulation during arts lessons were unable to use the same skills in other academic environments, a finding aligned with other empirical research on self-regulation [14]. In a follow-up study, Oreck, Baum, and McCartney [17] examined the impact of prolonged arts involvement for young people with interest, aspirations, and talents in the arts. In this second study, the development of resilience, self-regulation, and general habits of practice, focus, and discipline transferred to other out of school contexts. These two studies in combination suggest that self-regulatory skills can transfer between the arts and other settings if there is a cross-curricular focus, in which several subjects are approached as essential parts of a complete educational experience, and where the teaching of self-regulatory behaviours is an explicit instructional

objective. The research reported in this paper has both of these features, namely, a cross-curricular focus with arts education and ecology, and explicit instruction of SRL skills where these processes were scaffolded by the teacher and artist using the ePEARL tool.

## **3. Method and Data Sources**

### **3.1. The Learning Through the Arts Program and Research Site**

Since its inception in 1994, Learning Through the Arts (LTTA) has grown to involve 300 schools across Canada. Artists and classroom teachers develop eight-week units of arts-based lessons in non-arts curriculum areas. LTTA is typically implemented in a school for three years, and teachers and artists are supported in their on-going professional development. LTTA’s positive outcomes are largely attributable to an ongoing focus on research and evaluation often, as in the present case, in collaboration with other institutions. Another feature of LTTA’s structure is its ability to adapt to local situations. This aspect of the program structure is particularly salient in the present context because of the long-established importance of examining environmental issues in a local context [18] and of reaching learners through issues relevant to their personal lives [19].

Our research describes one eight-week LTTA segment involving ePEARL as a tool to support learning about energy conservation and renewable energy sources. The school, located in Toronto, Ontario, Canada, was selected on the basis of several factors: (a) a clear willingness on the part of the classroom teacher and her principal to take part in the research, (b) a commitment to learning about the technology, and (c) an abiding interest on the part of the artist on issues related to ecology. There were 25 students involved, predominantly Tamil. The remaining students were of Asian, Greek and Anglo-Saxon heritage. The artist (a dancer) had been involved with LTTA for close to a decade.

### **3.2. Data Collection**

A variety of measures were used to assess the knowledge, attitudes, and behaviours of the study participants. We used pre-and post-surveys, field observations, and individual and focus group interviews to gather data from the artist, classroom teacher, and the students. Data were collected over a two-month period, in the spring of 2009. One of the researchers made classroom observations six times over the course of the study and a research assistant was present in the classroom when ePEARL tool was used, serving both as a technical support person and

interacting with students as they learned to use the tool and developed their portfolio artifacts.

Researchers at the Centre for the Study of Learning and Performance (CSLP), one of the institutional partners for the work reported here, have developed two pre-and post-study measures for assessing self-regulatory strategies in the classroom. Abrami et al. [20] developed the Teaching and Learning Strategies Questionnaire (TLSQ) as a way for teachers to describe their use of self-regulation strategies and portfolio processes, based on Zimmerman's [14] research. Abrami and Aslan [21] developed the Student Learning Strategies Questionnaire (SLSQ) as a way to triangulate the data from the TLSQ and further validate the occurrence of self-regulation processes and portfolio use in classroom. The SLSQ contains several open-ended questions and 20 close-ended Likert scale questions designed to match the learning strategies questions asked of teachers. Only the SLSQ was used in the present study; the TLSQ will also be used in an upcoming three-year research program.

Interview questions were constructed around two general themes: the use of the ePEARL tool and the effectiveness of the arts as a vehicle for gaining an increased awareness of energy use and conservation. The artist and teacher were interviewed individually. Individual interviews with two students as well as focus groups with all of the students were also conducted. The interviews were transcribed and subsequently analyzed by the authors of the present paper.

This combination of methods to gather data was partly because of the unique nature of the curriculum unit, in that the cross-disciplinary focus involved both ecology and the arts. It was also used because the researchers felt that a suite of approaches was needed to provide both objective and anecdotal evidence for students' potential growth in understanding about energy conservation as well as the use of electronic portfolios to support learning.

## 4. Results

The findings are discussed in terms of three broad headings: (a) using ePEARL as a tool for self-regulation, (b) technical and pedagogical challenges of ePEARL, and (c) approaching ecology through dance. Findings for the first two headings are based on interviews, observations, the portfolios, and the pre-and post-surveys. The final section is based on interviews, portfolios, and observations as the pre-and post-surveys did not include questions on the content of the curriculum.

### 4.1. Using ePEARL as a Tool for Self-Regulation

In the context of a classroom culture and an arts-based school that has long supported self-regulated learning, ePEARL was an effective tool for promoting self-regulation for many of the students. This was evident in terms of the specificity of the goals that the students set for themselves. Students described how they modified their goals based on the feedback from their teacher and parents. Using ePEARL also made it easier for students to organize their work. One girl described how much she enjoyed personalizing her homepage, sharing her portfolio with her peers, and sharing the work that they produced. She also described the process of reflecting on the work of her peers: "Well, a reflection is when you say something about the artifacts [using their] criteria...I think it really helped because it's not really criticizing anybody, it's kind of helping them do a better job."

The teacher also commented on the importance of having a feature that allowed students to reflect on one another's work. She also noted that many of the students acted on the comments she made in their portfolios and that parents had also viewed the students' work. Another key feature for the teacher was that the work could be easily archived, making it easier to keep records, and creating another way for students to reflect on the growth of their thinking and knowledge. The artist also found the feedback feature of ePEARL useful and engaging. Her comments to the students were thoughtful and provided useful advice for students. For example, one student had expressed trepidation at the thought of speaking in front of others, and the artist wrote the following comment in the student's portfolio: "Try practicing speaking in front of a few friends. It really is fun—once you get the hang of it—and practicing with friends is a great way to get a little more comfortable speaking in front of a group, too."

Our analysis of the pretest and posttest scores on the SLSQ support the findings from interviews with students and the observations of the teacher, researchers, and the artist reported above. Using ePEARL helped engage students in their learning, provided an effective organizational tool, and facilitated the development of self-regulation skills, especially goal setting, and peer feedback.

Seventeen of the students in the class completed both the pre-and post-surveys. For the 20 items on the SLSQ, 2 were unchanged from pre-survey to post-survey, 13 changed in a positive direction, and the remaining 5 items changed in a negative direction. None of the negative shifts was significant. Of the 13 positive changes, 4 were significant ( $p < .05$ ) and occurred in two areas: learning goals and working with other students. The two items related to learning goals that shifted positively were in

response to the statement, “I set my own learning goals” ( $p = .01$ ), and “I revise my goals when necessary” ( $p = .02$ ). In terms of interacting with peers, the two significant positive shifts occurred with the statements, “I use comments from my classmates to improve on my work” ( $p = .05$ ) and “I work well with other students” ( $p = .01$ ). These results are in accordance with interview comments and classroom observations regarding the use of ePEARL. Most students were enamored with the ePEARL function that allowed them to comment on their peers’ work and provide critiques, and several spoke about having a clearer idea of how to set learning goals.

#### **4.2. Technological and Pedagogical Challenges of ePEARL**

There were several technical challenges experienced during the first few weeks that ePEARL was used in the school. These included errors in page loading and the disappearance of video clips from desktops. Other difficulties were related to the video recordings of the dance sequences. However, due to the strong technical support at the school, these problems were addressed and students did not lose their momentum for the project.

One of the main concerns regarding the ePEARL implementation was not related to the technology per se but to the fact that the students were accessing ePEARL at school in a computer lab setting which was not often available for their use. Given these accessibility issues with the computer lab setting, we will be providing laptops for an upcoming three-year study to supplement the computer lab sessions. In addition, it is important to note that 75% of the students were able to access ePEARL at home because it is a web-based tool. Many of the frustrations they experienced at school disappeared when they worked with the program at home.

#### **4.3. Approaching Ecology through Dance**

Using ePEARL to support this particular curriculum unit was challenging in that dance is a difficult medium to capture in terms of artistry and the meaning that it carries. These difficulties were exacerbated by the difficulties with the video recordings noted earlier. That being said, the students nevertheless produced impressive artifacts considering the complexity of the project and the time spent on the unit.

The students worked in pairs, both to identify the issue of study (e.g., use of wind turbines or geothermal energy sources) and to develop their dances. One child noted: “It was easier [to work in pairs] because if you didn’t know what to do, your partner was there to help you out. And sometimes it got hard because you or your partner might not know

what to do, right, so you have to ask for help sometimes. But I think it was easier because there were two brains working together, so it made it a lot easier. I would also say that ePEARL helped us because if you forgot something [it was there}. And it helped make your presentation more presentable.” Students also commented on the importance of viewing the videos in order to get a better sense of their dance sequences and whether the dance conveyed the energy issue they had chosen. One student said, “I thought it was pretty cool sharing your videos and everything, and at first I was sort of nervous ... and I was mostly afraid about the comments people were going to write. But in the end, when I read them, they actually thought it was pretty cool.”

From the data collected, it was difficult to ascertain the extent to which students’ understanding of ecological issues was enhanced through the project and through ePEARL itself. Not surprisingly, in an eight-week unit using a new piece of technology, there was more emphasis on the learning the ePEARL tool than on the curricular learning. That being said, one of the advantages of conducting this research in a three-way institutional partnership is that we have subsequently been able to extend the research to the 2009-2010 academic years.

The students also expressed the desire to continue to use ePEARL to enhance their learning. One student commented, “ePEARL is going to help you a lot with goals—you sort of straighten out your goals and so you know what you want to do in the future and stuff.”

### **5. Significance of Findings**

Research evidence demonstrating the effectiveness of electronic portfolios and arts-based approaches to learning is not sufficient to ensure wide-scale adoption and faithful use of evidence-based educational software like the Learning Toolkit. This is particularly obvious with ePEARL because, even though it is technically simple to use, the underlying student-centred pedagogy presents challenges to both teachers and students. Teachers who are personally committed to using ePEARL, and who have administrators and technical personnel who are actively supporting its use, are able to more regularly and consistently integrate ePEARL in their teaching [12]. On the other hand, teachers who do not personally volunteer for these projects or feel as if their administrators and technical personnel are not providing adequate support are less likely to persist in the face of technical and time constraints. In the research reported here, the teacher, artist, administrator, and the technical personnel, both on and off site, were all actively supportive in bringing the ePEARL tools to the students. Evidence of the commitment on the part of the teacher and

administrator included the desire to continue using ePEARL after the pilot study was completed and to expand that use beyond ecology and the arts to reading and writing, involving new artists and curriculum areas. Another form of evidence of the commitment on the part of the dancer in the present study was her attendance at follow-up meetings at the board level in support of the ecology and the arts initiative, as well as a detailed write-up for other teachers and artists to use in future teaching.

On the basis of the present study and other related research [22], we have learned that the use of the LTK should be a school-based or board-based initiative. We are also aware that teachers need to be supported with extended professional development. The teacher, research assistant, and artist involved in the present study all took part in a day-long professional development session to learn about ePEARL and self-regulated learning. These kinds of professional development sessions are integral to the Learning through the Arts (LTTA) structure as well. Lastly, while educational software may provide the means to scaffold teachers and students in portfolio and other processes, these tools alone are not a sufficient condition for change in teaching practice if teachers are not proponents of self-regulated learning. As noted previously, partly because of her involvement in LTTA, the teacher in the present study already embraced a self-regulated approach to learning, both for herself and for her students. Because of this, the tool supported her teaching style and she was easily able to see its benefits. With the use of the LTK and its constituent tools, along with arts-based approaches to learning that are both authentic and engaging, it is apparent that children can develop self-regulatory behaviors as they become literate and empowered citizens of this information and challenge filled world.

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## **Session 9: Pedagogy**

Teaching by Discussion: A Case Study of Four Professors' Perspectives and Pedagogical Practices  
(Shih Chih Kuo)

Metacognition and Group Differences: A Comparative Study  
(Yasser A. Al-Hilawani)

Gender Differences in Some Chemistry Students' Voices on the Way They Prefer to Learn  
(Mercy F. Ogunsola-Bandele, Irene Osioma)

Poetry and Pedagogy: Aspiring towards Aesthetic Teaching – An Examination of the Pedagogical Imbalances in the Cognitive and Affective Development of Pupils  
(Jennifer Hennessy, Carmel Hinchion)



# Teaching by Discussion: A Case Study of Four Professors' Perspectives and Pedagogical Practices

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## Abstract

*This study explores the beliefs and practices of four university professors who use discussion as the major mode of instruction in their university classrooms. To unpack what they believe about teaching and learning as well as what teaching techniques and practices they advocate, four research questions are investigated: (1) What are professors' perspectives of discussion as a method of teaching and why do they employ this teaching strategy in their classrooms; (2) What strategies support discussion-based teaching in the university classroom; (3) How do the discussion strategies reported in this study support, conflict with, or go beyond current research in the field; and (4) What kind of gender bias, if any, and questions characterize their teaching practices? How do their practices compare to their teaching philosophies? Data collected suggest that discussion as a method of instruction requires a comprehensive knowledge of one's subject matter, careful preparation of classroom assignments and the classroom environment, and the ability to question and scaffold students' learning effectively. Findings suggest that all four participants believe that discussion supports critical thinking and therefore has more merit than other teaching pedagogies.*

## 1. Introduction

Higher education is one means by which students learn to integrate knowledge, communicate, collaborate, display critical thinking, understand other perspectives, and be active participants in a society is valid, then, the faculties at universities play a vital role in assisting students to develop and practice such skills. Faculties are not just responsible for imparting subject knowledge to their students; rather, they are responsible for teaching their disciplines effectively, motivating their students' learning and their interest in this discipline, and involving students in critical discussions and applications of this new knowledge. This is a part of

the current debate on higher education worldwide and its transformation to meet global challenges in the 21<sup>st</sup> century. One tool used to reach these goals by university faculties in higher education is discussion.

Previous studies have demonstrated that classroom discussion is one of the most effective teaching and learning strategies in the university classroom [1]. Discussion is a teaching pedagogy that emphasizes participation, dialogue, and communication [2]. During discussion, students learn not just to approach a problem or topic cogently, but also to examine their own thinking processes and test their implicit assumptions [3]. The advantages of classroom discussion comprise helping students develop significant understanding, self-awareness, understanding of diverse perspectives, and the ability to take action [4].

In university classrooms discussion involves sharing ideas, information, experience, reactions, and opinions. William Ewens explains "discussions elicit higher levels of reflective thinking and creative problem solving, including synthesis, application, and evaluation. There is also evidence that information learned through active discussion is generally retained better than material learned through lecture." Stephen Brookfield and Stephen Preskill also suggest that there are various benefits of classroom discussion, such as "it helps students explore a diversity of perspectives; it helps students recognize and investigate their assumptions; it increases intellectual agility; it develops the capacity for the clear communication of ideas and meaning; it helps students develop skills of synthesis and integration." Because discussion is such a valuable teaching strategy and learning process at the university, there is, indeed, a need to understand how discussion methods are implemented in the classrooms by professors who are known to be successful using this approach. What are various strategies for incorporating discussion into a classroom? What are various formats one can use for supporting discussion? What beliefs need to be in place for discussion to be central to one's teaching? How can classroom participation be encouraged?

These and other questions of this sort lead to this study and specifically an exploration of professors' perspectives and pedagogical practices as they relate to the use of discussion in the college classroom.

My interest in conversation came about as a result of my experience in university classrooms in the United States. I was impressed with how willing American university students were to express themselves in classrooms, even when their perspectives were rather naïve and uninformed. As such, American students responded very differently than did students in my native country of Taiwan. Conversation as an instructional method in Taiwan is not common. University students in Taiwan are more reserved than are students in the United States. This study is my personal attempt to more completely understand discussion as an instructional method for purposes of introducing the best of what the method has to offer into Taiwanese education.

## 2. Research Rationale

This qualitative case study explores practical pedagogical approaches to classroom discussion. There is general agreement that most professors have received very little support in learning to teach even though they usually have received intensive training in their disciplines [5]. The findings of this study should prove helpful by providing specific guidelines to follow in setting up a discussion-based classroom.

Discussion is one of the most extensively practiced pedagogies other than lecturing in university teaching [6]. Professors use discussion as a way for students to stay actively engaged, breathe life into the materials they have asked students to read, and to help students experience what it means to think in their discipline. Discussion moves the student from spectator to participant. Oddly, there have been few studies of discussion approaches to teaching related specifically to literacy, language or humanities. Furthermore, some of the existing studies on discussion are dated [7]; most have examined primary and secondary classrooms. The current study is a qualitative case study, conducted at a prestigious research university in the USA. It uses triangulated data from documents, interviews, observations, and email correspondence to uncover four professors' instructional practices and beliefs about the use of discussion in their university classrooms.

The study adopts an open naturalistic approach. Four professors, all in an English department at a major research university, were invited to participate in the study. After interviewing these professors about their reasons for using discussion as the major

vehicle in their teaching as well as what strategies they used to support discussion in their classroom, professors were observed for the entire spring semester of 2003. Data from each participant was analyzed individually and then looked at across cases for purposes of identifying common beliefs and practices [8].

The purpose of this study is to unpack key beliefs and practices which underlie the effective use of discussion as a method of teaching. Although not the focus of this particular research project, my hope is that the finding from this study will help new and novice faculties at the university level learn how to conduct and use effective discussion strategies in their college classroom. I envision the findings of this study as a resource which faculties and would-be faculties can use to enhance university teaching and instruction. This study aims to understand what we know about university classroom discussion as a method of teaching as well as how one might go about effectively leading classroom discussions. I firmly believe that the successful deployment of discussion techniques in the classroom has the potential to affect teaching in positive directions as well as to develop and support critical thinking.

## 3. Literature Review

The values of classroom discussions for students' learning are plentiful. Kenneth E. Eble writes, "discussion develops the individual skills of formulating and expressing ideas and opinions [9]. Discussion offers the opportunity for widening the student's perception of learning and of ways of learning and for making distinctions in the use of fact, opinion, belief, rumor, proof, value judgments, and the like."

Joyce Gall and Meredith Gall [10] claim that research has found that the discussion method is effective for five types of students learning outcomes:

- general subject matter mastery,
- problem-solving ability,
- moral development,
- attitude change and development, and
- communication skills.

Barbara Gross Davis asserts that "class discussion provides students with opportunities to acquire knowledge and insight through the face-to-face exchange of information, ideas, and opinions [11]. A good give-and-take discussion can produce unmatched learning experiences as students articulate their ideas, respond to their classmates' points, and develop skills in evaluating the evidence for their own and others' positions."

Stephen Brookfield and Stephen Preskill suggest that conversation invites students to practice the dispositions of hospitality, participation, mindfulness, humility, mutuality, deliberation, appreciation, hope, and autonomy [4]. In addition they suggest that classroom discussions help students to: 1) explore a diversity of perspectives; 2) increase students' awareness of and tolerance for ambiguity or complexity; 3) recognize and investigate their assumptions; 4) encourage attentive, respectful listening; 5) increase intellectual agility; 6) learn the processes and habits of democratic discourse; 7) develop the capacity for the clear communication of ideas and meaning; 8) develop skills of synthesis and integration.

William Ewens stresses that "compared with the traditional lecture method, discussions elicit higher levels of reflective thinking and creative problem solving, including synthesis, application, and evaluation [2]. There is also evidence that information learned through active discussion is generally retained better than material learned through lecture."

Joseph Lowman [3] stresses that:

"A useful classroom discussion, unlike a dormitory bull session, consists of student comments separated by frequent probes and clarifications by the teacher that facilitate involvement and development of thinking by the whole group. Dynamic lecturers captivate a class by the virtuosity of their individual performances. Exemplary discussion leaders accomplish the same end by skillful guidance of the group's collective thinking processes."

McKeachie and Kulik review research at the university level comparing the efficiency of lecture and discussion in encouraging students' learning and claim that the discussion pedagogy is more helpful than the lecture approach for inspiring students to have a positive view of learning as well as an incentive to learn [1].

David Bridges asserts that discussion is concerned with the development of knowledge [13]. He believes that discussion is more serious than conversation in that it requires the participants to be "mutually responsive" to the different views expressed as well as to be disposed to or "affected by opinions one way or another in so far as they merit acceptance or approval." Stephen Brookfield also notes that "discussion is one of the most effective ways to make students aware of the range of interpretations that are possible in an area of intellectual inquiry." Roland Tharp and Ronald Gallimore emphasize that as students interact during discussion, they construct an understanding of the

topic. Peter Frederick stresses "the fundamental value of discussions is that through them students develop a sense of ownership and responsibility for their own learning" [6]. While discussions can be effective in helping students think critically about what they are learning, fostering effective discussions can be challenging [2], [3], [4], [5], [13]. To have effective discussions, professors must know what goals they wish to reach and plan appropriate strategies to attain those goals [11].

#### 4. Perspectives of the Discussion Method

Why should professors' perspectives of the discussion method be investigated? Except for lecturing, classroom discussion is one of the frequently used methods in university teaching. Further, it is also a teaching method that challenges instructors most [5]. What traits are necessary for a good discussion? How do professors utilize the discussion method for their subject matter? Why is the discussion method advocated by professors? To answer these questions, research is required. Although the lecture is a prevalent form of imparting knowledge and covering all the up to date information students need to know, the information acquired may be lost easily if the students are not actively engaged in learning [14]. During classroom participation, students develop cognitive capacities, practice critical thinking aptitude, recognize conceptual materials, and develop expressive abilities [15], [16], [17]. The discussion method is a teaching strategy that helps students to learn effectively [6], [10], [12]. Paul Ramsden [18] advises that "active engagement, imaginative inquiry and the finding of a suitable level are all much more likely to occur if teaching methods that necessitate student activity, student problem-solving and question-asking and cooperative learning are employed." If this is the case then classroom discussion becomes an effective tool to enhance both lecturing and learning.

The aim of this study is to understand what beliefs are necessary in order to effectively use a discussion method of teaching as well as what instructional practices support discussion in the university classroom. The research findings will benefit inexperienced faculty learn specific teaching methods about discussion-based teaching from more experienced faculty.

#### 5. Research Questions

1. What are professors' perspectives of discussion as a method of teaching and why do they employ this teaching strategy in their classrooms?

2. What strategies support discussion-based teaching in the university classroom?
3. How do the discussion strategies reported in this study support, conflict with, or go beyond current research in the field?
4. What kind of gender bias, if any, and questions characterize their teaching practices? How do their practices compare to their teaching philosophies?

## 6. Research Methods

In this research I study what professors believe about the role of discussion in learning, why they advocate this approach, and what specific techniques they use to support discussion in their university classrooms. According to Sharan B. Merriam [22] “A qualitative case study is an intensive, holistic description and analysis of a bounded phenomenon such as a program, an institution, a person, a process, or a social unit.” Hence, John W. Creswell states that “A qualitative study is defined as an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting” [19]. In addition, Denzin and Lincoln emphasize that qualitative research involves an interpretive, naturalistic approach to its subject matter [20].

In this study, I pursue the qualitative case study principle and have placed emphasis on understanding through looking closely at people's words, actions and records. In addition, I examine the patterns of meaning which emerge from the data presented in the participants' own words. My task, as a qualitative researcher, is to find patterns within those words or actions, and to present those patterns for others to consider, while remaining as exact as possible in recording the world of the participants as they experienced it.

I aspire to discover patterns which emerge after close observation, careful documentation, and introspective analysis of the research topic. This study relies much on descriptive case analysis since it examines specific phenomena, within the pedagogy practices of professors at a private prestigious research university in the U.S.A.

## 7. Participants

I invited professors of literacy, language or humanities, teaching at a research university in the U.S.A. to participate in this study. Participants of both genders were invited. After sending out eighty recruiting emails and after having talked to more than ten prospective participants face-to-face in their

offices, four professors agreed to participate in this study.

## 8. Source of Data and Methods of Data Collection

To explore and understand these professors' beliefs and behaviors relative to discussion-based teaching I used 4 data sources: classroom documents (i.e., syllabi, handouts, etc.), classroom observations, interviews and email correspondence. Initially, I interviewed participants asking them to share their insights on discussion as a method in teaching and the techniques they thought they used when implementing discussion in their classroom. I then collected course syllabi and handouts, observed their classes and clarified things that were not clear to me via email correspondence.

## 9. Methods of Data Analysis

This qualitative case study has attempted to understand how four professors perceive and go about facilitating discussion in their university classrooms. A constant comparative method of data analysis – both within-case and cross-case analysis -- has been used. I have moved back and forth between concrete bits of data and abstract concepts, between inductive and deductive reasoning, between description and interpretation. I began with one professor, her interview, the observations and field notes I made, and the teaching materials I collected.

I then compared this professor profile against other professors from the same data set. These comparisons lead to categories that were then compared within and across cases. Comparisons were constantly made within and between levels of conceptualization with the result being the model I flesh out here. I see a model as a visual aid or picture which highlights the main ideas in a process or system.

## 10. Analysis of Findings

My research data suggests that there are three key components to a discussion method of teaching: 1) beliefs; 2) practices; and 3) environment. While I summarize all of the beliefs that these professors held below (see Table 1 and Table 2), for the most part a good discussion leader believes that learners want to learn. He or she also believes that talking about an issue leads to a deeper understanding of that issue and in this way teaching and learning is enhanced.

Table 1. Beliefs as key components to a discussion method of teaching
<ul style="list-style-type: none"> <li>✓ Active engagement in key to learning (Professors said they took a student's ability to discuss what was read as evidence of learning);</li> <li>✓ In order for discussion to work as a teaching method, students and instructors must share a common experience (or text), students and instructor need to be interested in pursuing the world of ideas, and students and instructors need to be willing to engage each other;</li> <li>✓ Knowledge is something learners construct rather than something teachers impose;</li> <li>✓ Discussion is seen as the provisional act one engages in on the way to reaching a conclusion;</li> <li>✓ Good discussions encourage in-depth understandings;</li> <li>✓ One should not answer each and every question that a student might have about a topic under discussion;</li> <li>✓ Allowing students to answer some question on their own encourages creativity and critical thinking;</li> <li>✓ The most important characteristic of a good discussion leader is the ability to listen to what other people are saying;</li> <li>✓ Good discussion leaders need to be able to ask challenging questions;</li> <li>✓ Discussion mirrors learning in that students can see how one idea builds upon another.</li> <li>✓ Classroom discussions are most effective when they are conducted as a two-way process;</li> <li>✓ Knowing student names support discussion;</li> <li>✓ A good discussion leader is polite, open-minded, and always ready to support students who have risked sharing their opinions;</li> <li>✓ A good discussion leader should have two characteristics: the ability to be neutral and the ability to listen;</li> <li>✓ A relaxed and friendly atmosphere is important;</li> <li>✓ Grades for classroom participation are not necessary;</li> <li>✓ The classroom environment is important; an ideal environment should be roomy and have a table around which everyone can sit and face each other. If no table is available, a circle allows students to exchange ideas with each other easily;</li> <li>✓ Space is important as sometimes ideas need to be dramatized to be understood;</li> <li>✓ Media (LCD projector, screen, television monitor, playback unit, and computer) is important as it opens up new ways to present materials and it gives students new ways to understand the material being covered;</li> <li>✓ It is important to use one's course syllabus to provide a structure for discussion;</li> <li>✓ Silence, as a strategy, promotes discussion;</li> <li>✓ The use of humor often enlivens a faltering discussion;</li> <li>✓ One way to organize instruction is by listing topics and questions for discussion; This also helps professors and students stay on track;</li> <li>✓ Assigned readings and pop quizzes make students aware that they are responsible for knowing the course material.</li> </ul>

Good discussion leaders also have skills. While I have summarized the strategies that these professors used above, what is clear is that they know how to ask important questions and support learning by keeping the conversation going. This is not always easy and their learning is never complete. Environment is a third essential. Class size, space, face-to-face conversations, and having technology handy are key.

Table 2. Practices as key components to a discussion method of teaching
<ul style="list-style-type: none"> <li>✓ Keep class size small;</li> <li>✓ Learn student names;</li> <li>✓ Arrange the room to facilitate face-to-face interactions;</li> <li>✓ Use course syllabus to structure the course and delineate responsibility;</li> <li>✓ Give students ownership of the class by allowing them to make some key decisions (Just remember that you have to live with what they decide so don't offer them the opportunity to make decisions you can't live with!);</li> <li>✓ Use the blackboard to create a daily agenda and to make the day's events predictable.</li> <li>✓ Use handouts to structure the class and keep students organized;</li> <li>✓ Help students get organized by walking students through the course schedule and the course requirements;</li> <li>✓ Provide background information as a way of beginning conversations;</li> <li>✓ Use technology to make abstract concepts concrete;</li> <li>✓ Provides demonstrations of how one systematically thinks through problems in the discipline being taught;</li> <li>✓ Provide lots of opportunities for students to apply analysis strategies they have been taught through class demonstrations;</li> <li>✓ Keep lectures short and use them to introduce students to key piece of vocabulary and key ways of thinking through the materials in this discipline;</li> <li>✓ Use questions to raise the level of conversations;</li> <li>✓ Use wait time to allow students to organize their thinking and to respond;</li> <li>✓ Restate questions if students do not seem to understand what are being asked;</li> <li>✓ Support students as they attempt to answer questions raised by others;</li> <li>✓ Scaffold students responses when it is obvious they are having difficulty responding.</li> <li>✓ Use humor, eye contact, and wait time to signal that you are listening;</li> <li>✓ Restate what you have heard;</li> <li>✓ Draw generalizations from specific examples which students can understand;</li> <li>✓ Accept partial and incomplete attempts at answering questions;</li> <li>✓ When things do not go as expected, change directions and consider approaching the topic from a new direction;</li> <li>✓ Use drama to enact difficult pieces of text and to support student understanding;</li> <li>✓ Assume a particular student's question is everyone's question unless it is obvious that that isn't the case;</li> <li>✓ Use graphics to demonstrate how people in this discipline think through problems in a systematic fashion;</li> <li>✓ Assume comprehension until you have reason to assume otherwise</li> <li>✓ Accept and encourage multiple interpretations</li> <li>✓ Do not move ahead and leave students who are having difficulty understanding behind</li> <li>✓ Put off questions which distract</li> <li>✓ Restate and summarize what students have said so that it is clear to the class</li> <li>✓ When students generate a new insight (one you hadn't thought of before) give them the praise that is their due</li> <li>✓ Before moving on to a new topic or closing down a conversation make sure that everyone has understood the major points and are more or less on the same page</li> <li>✓ In preparation for tomorrow's lesson, overview the new material that students will be encountering</li> <li>✓ Use evaluation techniques that ask student to synthesize what they have learned and that operate to extend the conversation that has been going on in the class</li> <li>✓ Use technology (like email and blogging) to extend conversations that have been started in class.</li> </ul>

In addition to these physical elements there are important psychological elements that are needed

including the creation and maintenance of a supportive environment conducive to talk.

The Figure 1 is my attempt to conceptualize a discussion method of teaching. Notice the cycle is continuous. The block at the top represents classroom discussion. The three remaining blocks represent the components which I see as key to having great classroom discussions. They represent my attempt to summarize what I have found from doing this study. Notice that all of the components are connected, with each supporting the other.

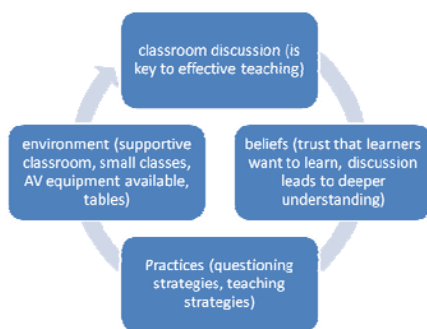


Figure 1. Discussion Method of Teaching

I believe the materials I have presented here make teaching by discussion less daunting and more rewarding for faculty who choose to utilize the discussion method in their university classrooms. In order to encourage professors to share challenges, reflections, and insights through discussions and to establish better practices, a faculty mentor program has been shown to be enormously important [21]. Mentor programs, if well developed support new faculty become part of the university community, lessen feeling of isolation, and help the novice teacher masters effective educational practices. In this final chapter, I would like to indicate that my findings not only answered the research questions I pursued, but also have exposed an important issue for anyone who wishes to use discussion methods in their higher education classrooms. Several topics follow. First, I discuss what I see as this study's limitation. Next, I talk about this study's contribution to theory and practice. Lastly, I make suggestions for future research.

## 11. Limitations

The purpose of this study was to explore the merits of using a discussion approach to teaching at the university level given the pedagogical perspectives and practices of four college professors who advocate this method of teaching. Limitations arise because of the small sample. Participant

recruitment was a limitation in that it involved finding professors who use discussion as a dominant mode of instruction in their university teaching, were willing to be observed and videotaped over the course of a semester, and who were willing to take time to share their perspectives, experiences, and reflections on their teaching. Participation was voluntary but limited to professors who teach the humanities, specifically language and literacy, at one major university. Given these sampling limitations, the findings cannot be generalized to the population under study. In order to compensate for this limitation I have attempted to do a thick description which allows readers to judge for themselves whether or not the findings are applicable to their setting. Merriam advises that "... providing enough description so that readers will be able to determine how closely their situations match the research situation, and hence, whether findings can be transferred." Further, Lincoln and Guba assert that "the naturalist cannot specify the external validity of an inquiry; he or she can provide only the thick description necessary to enable someone interested in making a transfer to reach a conclusion about whether transfer can be contemplated as a possibility." In a sense, the case study design itself has flaws. "A common complaint about case study research is that it is difficult to generalize from one case to another" [23].

The findings were also restricted by the fact that I was not very knowledgeable about the content of these courses. As a result I sometimes had difficulty judging the importance of what was highlighted and/or focused upon in discussion.

The duration of the study is another limitation. I only observed each professor over one semester, teaching one course, with one set of students. Watching the same professor teach the same course with a different batch of students might well result in additional important observations.

An additional issue (highly sensitive in my estimation) is that I found hard to criticize my participants. In part this was due to the fact that I was invited by the institution and by the professors to observe their classrooms. My position, from the start, was positive. I assured both the institution and the professors that I was here to learn about discussion as a method of teaching. Given this stance I have elected to be cautious rather than critical in my write-up and analysis of the data.

The findings of this study are further limited by the manner in which data was collected. The success or failure of a classroom discussion on any given day cannot be predicted. What I attempted to do was to observe, take field notes, and in most cases tape a full semester of each of these professors' teaching. Even

so anomalies occurred. There is no single day that is totally representative on any one of these professor's teaching. To the best of my knowledge I have tried to point these anomalies out to the reader. Although I conducted this study using a few available professors, the thick descriptions in this study of the specific strategies which these professors used to support discussion in their classroom constitute a major contribution to the existing literature on discussion as a method of teaching.

## 12. Conclusion

Findings from interview data suggest that there are lots of reasons to advocate for discussion as a major teaching method in college classrooms. Dr. Malone believes that classroom discussion is a way for student to embrace what they have experienced in their reading. Dr. Clark thinks classroom discussion is most effective when conducted as a two-way process. Dr. Clark sees classroom discussion as a provisional act; something someone engages in on the way to reaching a conclusion. And, Dr. Thurtle sees discussion as mirroring learning; showing students how one idea builds upon another.

All four participants argue that using a discussion method of teaching enhances students' critical thinking. They also argue that because of this single characteristic, discussion as a teaching method has more merit than other teaching pedagogies. Making discussion central to one's teaching requires advance preparation of one's syllabus, the effective use of questioning strategies, and the ability to scaffold student learning. Further, the physical classroom environment is important. Furniture needs to allow for face-to-face interaction. Class size needs to be kept small. Technology needs to be available to support and extend classroom conversations.

Each of the participants in this study worked to refine their ability to teach via class discussion through self-evaluation of their teaching over an extensive period of time. They all learned to consider students' opinions, needs and interests first when designing their courses. They take students' evaluations of their courses seriously and use students' comments to help them make changes. Respect for students and a desire to help them learn are seen as major goals.

In their interviews, all say that they have faced and have accepted the challenges that come with electing to teach via discussion. One of these challenges is isolation as all say that they have had to develop their classroom techniques alone rather than through discussion or collaboration with colleagues. Drs. Malone and Doyle reported that they developed their discussion pedagogy through replication and

modification of the techniques they experienced from the teachers they had themselves in college. Drs. Clark and Thurtle say they learned how to teach using the discussion method through trial and error.

## 13. Future Work

This research has led to new questions and areas of research: 1) What challenges do new or junior faculty encounter when they attempt to implement discussion in their university teaching? 2) How can experienced faculties best interact with new faculties to develop discussion pedagogy? 3) What curricular engagements might be developed to support new faculty "live," or experience firsthand, the power of discussion teaching? 4) What teaching support might institutions of higher education provide junior faculty? And which, of all those resources which are now being provided, do young faculty members find truly supportive?

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# Metacognition and Group Differences: A Comparative Study

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## Abstract

*Metacognition referred in this study to performing, in a problem solving manner, visual analysis and discrimination of real life events and situations in domains such as naïve psychology, naïve physics, and naïve biology. It was used, along with measuring reaction time, to examine differences in the ability of four groups of students to select appropriate pictures that corresponded with other pictures representing specific events, actions, or behaviors. Results showed no significant differences between deaf, hearing students from public Arabic schools, and hearing multinational students from private English school when correct responses were measured based on reaction time. These three groups of students obtained significantly higher correct scores and took significantly less reaction time to respond to items on the test compared to students with mild mental disabilities. This study suggested that students' age, processing time, and nuances that accompany the behavior could be advanced toward developing a model that explains inter and intra differences in metacognition.*

## 1. Introduction

Metacognition in day-to-day activities helps perceive, select, activate, and provide feedbacks on information and methods needed to deal with daily-life events via a self-referential or a feedback loop, a system that performs self-evaluation and thus adapts accordingly [10]. Metacognition in this sense is a mental process by which a person constructs knowledge and juggles cognitive strategies and skills to gain insight into one's environment. It entails employing higher order thinking processes including cognitive restructuring of events and interactive mental abilities [2] [5].

Metacognition, as perceived in this study, goes into the core of our mental assumptions that lie behind our actions. It goes beyond our stored repertoire of solution database when facing challenging situations; and when we think about thinking we reflect on various aspects of the situation one of which is our solution database for modification purposes. This takes place when we reflect solely or collectively on our practices [12]. This approach to metacognition is important in daily life interactions because it plays a role in

comprehending, explaining, influencing, manipulating, anticipating, and predicting actions and behaviors [1], [2]. Metacognition is performed during and throughout the learning process to gather needed information, to gain insights, and to plan actions. Although past experiences can help understand future situations and circumstances, new situations and circumstances present themselves sometimes in challenging manners and in different contexts in a way that previous solutions may not apply. Metacognition comes to play in this case because it increases the chances of obtaining desirable outcomes, especially when a person changes plans and encounters explicit novel situations for which there are no spontaneous and ready to use automatic responses. This conceptualization has made metacognition associate with the concept of intelligence and with the psychological domain of knowledge under the rubric theory of mind [7], [8], [11].

## 2. Literature Review

Metacognition has been used in research to examine individual differences in perceiving and in understanding daily-life activities and events within and across cultures. Research using visual-voiced/verbal and visual-visual measures of metacognition reported consistent findings between hearing and deaf and hard-of-hearing students when they came from the same cultural background [1], [4]. The visual-voiced/verbal measure focused on visual analysis of real-life colored pictures; students, depending on their hearing status, were presented with either four voiced options or four signed options that provided possible explanations of what the pictures revealed or represented [1]. The visual-visual measure emphasized primarily visual analysis and discrimination to reduce the need for voiced/verbal communication. Students were presented in this measure with five real-life pictures and were asked to point to the picture that was different [2]. This research revealed that hearing and deaf and hard-of-hearing students performed comparably on the two types of metacognitive measures when each was applied in a separate research study and when they were applied together on the same groups of students [1], [2], [3] and [4]. Using the visual-visual measure in a further study has also showed that while hearing students, deaf and hard-of-hearing students, and students with physical disabilities obtained

comparable scores on the measure, the performance of these three groups of students was significantly higher than the performance of students with mild mental disabilities (MiMH) [3]. The study indicated that the significantly low performance of students with mild mental disabilities was attributed to poor knowledge acquisition and to difficulty in performing simultaneous visual analysis and discrimination. Students with mild mental disabilities were able to perform simultaneously visual analysis and discrimination when the presented pictures were thematically simple with apparent discriminant features. It was concluded in the study that the difficulties that these students face when analyzing pictorial stimuli are situation specific and do not represent an indiscriminate failure of visual analysis and discrimination [3].

The visual-voiced/verbal measure was implemented in a cross-cultural research using elementary school students from the United States of America and the United Arab Emirates [6]. Results revealed that while the performance of hearing students was significantly different based on their cultural background, no significant difference was found between hearing and deaf and hard of hearing students who came from the same culture. This study indicated that hearing differences do not affect problem solving and thinking processing in daily life interactions. That is, deaf and hard-of-hearing students were able to make thoughtful and accurate decisions about situations and were capable of interpreting presented behaviors in a way commensurate with their hearing peers who came from the same culture. The study suggested that intercultural differences in metacognition are due to core experiences and to opportunities to mediate these experiences through interactions with others. It indicated that inferences and knowledge about acts and behaviors could vary by culture in a way that the same concepts or behaviors could lead to different inferences and responses due to differences in learning experiences. Variations in nuances that accompany the same behavior could lead to variations in interpreting behaviors [9].

A major inquiry of this current study is to find whether or not the results concerning the cross-cultural differences in interpreting real life events and situations are attainable when students from different cultures and backgrounds reside in the same geographical area [6]. Therefore, this present study aimed at comparing the performance of various groups of elementary grade level students on a constructed test designed and built to measure both reaction time and metacognition in naïve psychology, naïve physics, and naïve biology domains. These three specific domains have focused on knowing about people (e.g., theory of mind development), plants and animals, and physical objects as they exist in the natural environment. They have constituted most of the external world with which individuals

interact and have formed, at the same time, the areas in which critical thinking skills are most likely to be utilized [13]. The groups were hearing Arabic students from public schools, hearing Arabic students from a private English school, hearing foreign English-speaking students from a private English school, deaf Arabic students from a public school for the deaf and Arabic students with mild mental disabilities from a private English school.

### 3. Analysis of Findings

Results showed that hearing students from private English school obtained the highest correct raw score (22.80 out of 28 points) followed by deaf students (20.95 out of 28 points), then by hearing students from government schools (17.24 out of 28 points), and finally by MiMH students 11.86 out of 28 points). The MiMH students took the longest reaction time to finish the test and that the means of correct scores of all students decreased when using the mean of reaction time as the criterion to calculate students' correct responses. Using the time variable to calculate correct responses had a negative impact on the performance of all students. Correlation results showed a significant relationship between scores on the test of metacognition and scores calculated based on mean reaction time ( $r = .588, p < .001$ ) and a significant negative relationship between reaction time and scores calculated based on mean reaction time ( $r = -.644, p < .001$ ). There was no significant relationship between scores on the metacognition test and reaction time ( $r = -.027, p = .770$ ). The age variable was significantly correlated with scores on the metacognition test ( $r = .216, p < .016$ ) and with scores calculated based on mean reaction time ( $r = .278, p < .002$ ) but not with reaction time ( $r = -.089, p = .325$ ).

Students' school grades (available only on hearing students from private English and from government Arabic schools,  $n=88$  students) in language, math, and science were significantly correlated with each other but not with scores on the test of metacognition, with students' reaction time, or with scores on the test of metacognition based on reaction time. There was a significant positive relationship between scores on the test of metacognition and students' reaction time but a significant negative relationship between reaction time and test scores based on reaction time. There was a significant negative correlation between the age variable and the science subject matter and there was a significant positive relationship between the age variable and scores on the test of metacognition and between the age variable and scores on the test of metacognition calculated based on mean reaction time.

Results revealed a significant negative correlation for students from private English school between their age and reaction time ( $r = -.30, p < .04$ ) and between reaction time and metacognition test scores based on

reaction time ( $r = -.85$ ,  $p < .001$ ). There was a significant positive relationship between this group's age and their metacognition test scores based on reaction time ( $r = .34$ ,  $p < .02$ ). The relationship between scores on metacognition test and test scores based on reaction time almost reached the significant level ( $r=.277$ ,  $p=.051$ ). Students' age was not significantly correlated with metacognition test scores ( $r = .12$ ,  $p = .399$ ). Results for hearing students from government schools showed that the age variable was not significantly correlated with metacognition test scores ( $r = -.18$ ,  $p = .28$ ), with reaction time ( $r = -.10$ ,  $p = .56$ ), or with metacognition test scores based on reaction time ( $r = .02$ ,  $p = .92$ ). There was a negative significant relationship between reaction time and metacognition test scores based on reaction time ( $r = -.64$ ,  $p < .001$ ). Results showed a positive significant relationship between scores on the test of metacognition and students' test scores based on reaction time ( $r = .65$ ,  $p < .001$ ).

The MANCOVA analysis revealed the age variable not to be significant, Hotelling's  $F(3, 117) = 1.446$ ,  $p = .233$  ( $\eta^2 = .04$ , weak effect size) but identified significant differences based on students' groups, Hotelling's  $F(9, 347) = 15.409$ ,  $p < .001$  ( $\eta^2 = .29$ , large effect size). The Bonferroni follow-up analysis revealed no significant differences between deaf students, on one hand, and normal hearing students from Arabic and English schools, on the other hand. However, these three groups of students performed significantly higher on the test than the MiMH group. The normal hearing students from English school performed significantly higher than those from Arabic schools. With reference to analysis regarding students' reaction time, results showed the MiMH group to take significantly the longest reaction time to respond to items on the test compared to the other three groups. Analysis showed no significant differences in reaction time between deaf students and hearing students from Arabic and English schools. However, hearing students from English school took significant longer reaction time to finish the test compared to hearing students from Arabic schools. With reference to scores calculated based on reaction time, the Bonferroni follow-up analysis revealed no significant differences between deaf, hearing students from Arabic schools, and hearing students from English school. Analysis showed that these three groups of students obtained significantly higher scores compared to the MiMH group.

Another MANCOVA analysis showed students' age not to be significant, Hotelling's  $F(3, 101) = 1.105$ ,  $p = .351$  ( $\eta^2 = .03$ , weak effect size) but identified significant group differences, Hotelling's  $F(6, 200) = 9.910$ ,  $p < .001$  ( $\eta^2 = .23$ , large effect size). The sex variable was not significant, Hotelling's  $F(3, 101) = .100$ ,  $p = .960$  ( $\eta^2 = .01$ , weak effect size) nor was there a significant interaction between the sex variable and students' groups, Hotelling's  $F(6, 200) = .215$ ,  $p = .972$  ( $\eta^2 = .01$ , weak effect size). With

reference to correct scores on the test of metacognition, the Bonferroni follow-up analysis revealed that hearing students from English school performed significantly higher on the test than hearing students from Arabic schools. No significant difference was found between the performance of deaf students, on one hand, and the performance of hearing students from Arabic and English schools, on the other hand. With reference to students' reaction time, the Bonferroni follow-up analysis showed that hearing students from English school took significantly longer reaction time compared to hearing students from Arabic schools. There was no significant difference in reaction time between deaf students and hearing students from Arabic schools and between deaf students and hearing students from English school. Finally, the Bonferroni follow-up analysis revealed no significant difference between the three groups of students (i.e., deaf, hearing Arabic, and hearing English groups) on the test scores calculated based on reaction time.

#### 4. Contribution to Knowledge

This research showed that when calculating correct scores based on reaction time, the performance of hearing students who were enrolled in the two different school systems was comparable regardless of school type (i.e., private English or public Arabic schools). Taking longer reaction time allowed hearing students from private English school to perform higher on the given test compared to hearing students from public school. One explanation of this result could be that training students in the private English school to reflect on their interpretations and perceptions in academic settings explains their longer reaction time to respond to presented stimuli. It appears that making students think, rethink, and reflect is one of the areas that differentiated the private from the public schools.

This present research revealed an obvious trade-off between time and accuracy. This important finding could be used to explain the observed significant differences noticed in the cross cultural study [6]. It is possible that the sample from the USA had taken longer reaction time compared to the sample from UAE. Another variable that could also be used to explain the observed differences in the cross cultural study is students' age. Research in this area showed that metacognition is influenced by the age variable [2]. Examining the data showed that the hearing USA sample was significantly older than the hearing UAE sample. No significant age difference was identified between the deaf students living in the two cultures.

The comparable performance of deaf students to the performance of students in private and in public schools is a clear indication that this approach to metacognition is suitable for deaf students and allows them to show what they know by relying on their strong psychological modality of thematic and

common features analysis of visual stimuli. It appears that hearing loss per se does not affect mental processing as measured in this study; that deaf depend on visual-spatial perception; and that deaf are strong in simultaneous visual processing.

## 5. Conclusion

This approach to metacognition, when combined with measuring reaction time, differentiated between groups of students based on cognitive abilities (those with mild mental disabilities compared to those without mental disabilities) and schooling experiences (private school compare to public schools). These results lend support to this metacognitive approach because it capitalizes on the learner's visual-spatial perception and processing and could also be used with students who have a low verbal repertoire [2].

The deaf and hard-of-hearing students and hearing students from private and public schools performed significantly higher than the MiMH group on the test of metacognition and on scores based on reaction time. The MiMH group took significantly the longest reaction time to respond to items on the test compared to the other three groups. The longer reaction time was not accompanied with higher correct score on the test. This result is expected due to the low cognitive ability of the MiMH students, as measured by the IQ test, when considering that scores on the metacognition test, time elapsed in the reaction time task, and scores calculated based on reaction time all correlated significantly with the IQ score. It appears that the low performance of MiMH students and the longer reaction time that they took in the study to respond to the presented visual stimuli are a manifestation of their cognitive system.

## 6. Future Work

More test items could be added in future research to represent equally the naïve biology, the naïve physics, and the naïve psychology domains which, in turn, could impact the reliability coefficient level of this instrument [4]. Future studies may re-examine the finding of the current research and include students drawn from other school systems. Upcoming research in this area may focus on inter and intra cultural examination of metacognition in addition to the suggestions voiced in previous studies which included its relationship with performance on social adjustment and adaptive behavior scales, individualized and group IQ tests and subtests, and standardized achievement tests [5]. Additional studies could be conducted to determine the source of significant differences at the cultural micro levels which may include daily schedule of different groups of individuals, type of friends, daily exposure to others, and fluency with languages, curriculum content analysis, and other cultural, educational, or familial elements.

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# Gender Differences in Some Chemistry Students Voices on the Way They Prefer to Learn

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## Abstract

*This study which is an outgrowth of previous studies on learning/cognitive style reports on students' voices (which are usually missing components for classroom decisions) in the way they prefer to learn. The subjects were 100 fresh university students of both sexes but with the males out numbering (four times) the females. These were among the early arrivals that registered for chemistry during the first semester of the 2008/09 session. Two different instruments were used to capture the student's voices and the cognitive/learning styles. Although the non parametric  $\chi^2$  analysis revealed no statistical difference in the cognitive styles as regards sex, but while most of the male students were emphasizing the need for detailed lecture notes and other reference materials, their female counterparts 'gave a shout' for their teachers to deemphasize lecturing and conduct more practical lessons to help them understand the chemistry concepts. Recognizing such differences among students should lead science educators to consider how they teach to meet these differences.*

## 1. Introduction

The science education in Nigeria and elsewhere is once again in the midst of another surge of science education reform [1]. These science reform efforts focus on the belief that all students are capable of learning science and therefore must be granted the necessary opportunities and condition for optimal science learning.

The National Policy on Education emphasized the need of Science for All students at the lower levels and that curriculum content should be designed to meet the interests, abilities, experiences, understandings, and knowledge of students [12].

It has also been emphasized that it is imperative for schools to teach more effectively in order to foster scientific literacy, rather than cover more content. Science for all is based on the conviction that a scientifically literate

person is one who is cognizant that science, mathematics and technology are human enterprises dependent upon one another. But although science for all emphasizes what students should learn it also examines how science should be taught, making the claim that effective teachers consider the material to be learned, the background of the students, and the conditions under which teaching and learning take place [1]. Cognitive/ learning styles have been used interchangeable in various researches which are focused on students because of their similarities [14, 15, 16, 17, 18]. The preferences, tendencies, differences and strategies that individuals exhibit while learning constitute what has come to be called "learning style". Among the theories of learning styles, the Dunn Model [3] is one of the most comprehensive in scope and practice for teachers [2]. Many elements in the Dunn Model complement the reform efforts in mathematics and science education that emphasizes increased attention to student centered learning. Attention to learning style is attention to individual differences and individual strengths. Recognizing such differences should lead educators to consider how they teach to meet such differences or allow students some flexibility in completing assignment or projects.

By expanding the range of instructional approaches, teachers increase the chances that individuals will construct meaning from active learning experiences that correspond to one's learning style. But perhaps the greatest benefit from attending to learning styles in science education is that of placing more responsibility for learning on the students themselves. Students who discover and understand their personal learning styles most of the time do apply such information with great success and enthusiasm [7]. Thus, using different learning styles can be an ongoing process and aid in attacking new or difficult learning situations and the information processing.

## 2. The focus and participants of the study

Since it was found that students voices are usually less solicited and honored as valuable perspectives on schooling and so are usually missing from classroom discussions which are usually teacher centered [10, 13, 19]. This research is a report on chemistry students' voices on the way they prefer to learn as regard sex.

The subjects were 100 fresh University students who were among the early arrivals and registered for chemistry during the first semester of the 2008/9 session. They constitute about 70% of the total number of students expected to register for chemistry for that session. The subjects are of both sexes with an average age of 18 years. These students who must have studied and passed chemistry with at least a credit at ordinary level are from the following departments; Biological Sciences, Chemistry, Mathematics/ Computer Science, Geography, Physics, Crop Science, Science Education. 75% of the samples are males while 25% are females. The students were introduced to the instrument by the researcher and the students went ahead to complete their questionnaire.

## 3. Design and Procedure

The same instrument, which was adopted from Heath and previous studies, was also used for the quantitative analysis [8], [14], [15], [18]. But considering the time lag, the instrument was again subjected to a panel of five chemistry lecturers with a minimum of masters' degree in chemistry to revalidate the content of the instrument. It was found to be still valid and appropriate for the students' level. Also to capture the student's voices according to sex on the way they wish to learn chemistry, they were asked to write freely on the way they are presently being taught and how they will prefer their chemistry teachers to teach them. Altogether there are about 13 lecturers teaching the various aspects of chemistry and the students only gave general comments without being specific to a particular lecturer. Some of these statements are captured and discussed later.

## 4. Findings and Analysis

Contingency tables for frequency distribution of respondents in the four cognitive styles and sex (see Tables 1 and 2) were set up. The non-parametric  $X^2$  statistics was

considered appropriate for the analysis because the data were only in frequency counts. Table 3 on the other hand shows the students feedback on how they prefer to be taught. The  $X^2$  is not statistically significant at the criterion level of 0.05

In an earlier study of cognitive styles among Nigerian students, the general order was Recall-Principle-Application-Questioning (R-P-A-Q) and the distribution ratio was 5:3:1:1 [20]. On the other hand, R and A options were selected by the American students more often than the P and Q. it is interesting to have another set of Nigerian subjects in this study having a greater preference for Q over A [15]. The general order was R-P-Q-A. These results are still unlike the Israeli students in Tamir's study who had a greater average score in critical questioning.

## 5. Discussions

From the students' feedback in Table 3, the students emphasized the need for their teachers to teach to their level of understanding, allowing them to ask questions while lecturing, the rate of transmission of knowledge was considered too fast, recognition of preconception of students. Emphasis on teaching and not lecturing, needs for explanations and examples on concepts being taught and using different teaching methods: But while most of the male students were emphasizing the availability of lecture notes and other reference materials most of the female students focused on the need for their teachers to conduct more practical lessons to help them understand the concepts the student's quest to be allowed to ask question is supported by the results in Table 1 and Table 2, where students are seen to prefer to question than apply and the female student's quest for skill acquisition is supported by another study on Nigerian study [18].

### 5.1. Contribution to the teaching and learning of science

From all the students' reactions gotten, while some students are very comfortable with the way their teachers teach, others are complaining that they need a change. So one question that could come in handy to the science teacher is—how can I teach to my individual students learning styles with several students in my class complaining?

**Table 1. Observed and Expected Frequencies of Selection in the Four Cognitive Styles Cognitive Style**

Frequency	R	P	A	Q	X <sup>2</sup>	df	F (0.05)
Observed	6391	5899	4685	4811	0.07	3	7.82
Expected	5446.5	5446.5	5446.5	5446.5			

**Table 2. Observed and Expected Frequencies of Responses in the cognitive Style test according to sex Cognitive Style (N-100)**

Sex		R	P	A	Q
Male	Observed	4580	4255	3375	3433
	Expected	4588.9	4235.7	3364.0	3454.4
Female	Observed	1811	1644	1310	1378
	Expected	1802.1	1663.3	1321.0	1356.6

**Table 3. Students' Feedback**

Lectures as he wishes and gives test without informing us.	His jovial whenever he is lecturing
Uses words that we cannot understand and are not familiar with	Teaches well and gives note
Gets angry easily and doesn't forgive	Handle us the way mothers handle their children
Makes the courses very difficult to learn	We can't understand her voice
Gives a lot of explanatory note and lectures to our understanding	Doesn't write on board and there are many calculations in Chemistry
Teaches even out of syllabus	He does not give time for questions
Teaches like he is fighting and mostly dictates notes	He sometimes become angry with us
Too much lecture notes and don't allow students ask questions	In practical, sometimes they do not allow us to perform the practicals ourselves.
Use only lecture method and do not give handout to students	He is not friendly and very harsh
Lecturing and given note at the same time	Has good method of teaching
Immediately he comes in, he takes attendance and starts talking to the board	After asking questions and no response made by us, she becomes annoyed
Gives explanation and allow students to ask questions	Mostly starts by giving quiz about the previous topic
Gives note while lecturing and asks unnecessary questions	Carries only few members in the class
Make mistakes sometimes on what he give to students.	Use old method and without expressing himself well, he does not care if the students understood or not
Deviate from the main lectures and embark on correction of speech and grammar	Very good lecture and explain everything before given note

To overcome these problems, lecturers should strive for a balance of instructional methods—vary their instructional methods (as opposed to trying to teach each student exclusively according to his or her preferences.) If the balance is achieved, all students will be taught partly in a manner they prefer, which leads to an increased comfort level and willingness to learn. Teaching methods on the other hand also vary. Some instructors lecture, others demonstrate or lead students to self-discovery; some focus on principles and others on applications; some emphasize memory and others understanding. However, alluded to the fact that certain children described as slow learners in a course with one teacher became outstanding achievers in the same course, when the same teacher changes his method of instruction or the nature of his test [22]. Hunt postulated the matching model. The model is predicated on the possibility of teachers

influencing the student cognitive/learning style [9]. According to Hunt, there can be a complete match of the style between teachers and students or a mismatch. And if there is a match, it would lead to high achievement. In fact, when mismatches exist between learning styles of most students in a class and the teaching styles of the lecturer, the student may become bored and inattentive in class, do poorly on tests; get discouraged about the courses, the curriculum and themselves, and in some cases change to other curricula or drop out of school [4, 5, 6].

On the other hand University lecturers (engineering and sciences) confronted by low test grades. Unresponsive or hostile classes, poor attendance and dropouts, usually know something is not working well and they may become overly critical of their students or begin to wonder if they are in the right profession.

Most seriously, the society loses potentially excellent professionals who could not find a

way out [4]. Accepting that students differ in learning styles is to accept the belief that all students can learn. So the needs of the science society should be channeled towards a complete re-orientation of the learners and educators. This will call among others for the review of the curriculum, teacher preparation and the delivery strategies.

## 6. Conclusion

Finally literature is replete with national-level studies that indicate that many teachers are still unaware of their students learning styles but one question that has continued to hunt science researchers is whether this research based strategy has found its way into the science classroom and if it has if students for which they are used are actually aware that it is to be used for their benefits. For instance, Ogunsola-Bandele observed that not only should research be relevant to objectives but successful results should be implemented [16].

Students are usually aware of the elements for success, but the lecturers need to help them find this success. According to Jackson and Davies [10], significant progress has been made to provide students with a developmental responsive education but we are only halfway up the mountain, with the most important and perhaps the most difficult climb remaining.

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# Poetry and Pedagogy: Aspiring towards Aesthetic Teaching – An Examination of the Pedagogical Imbalances in the Cognitive and Affective Development of Pupils

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## Abstract

*This paper provides a review of the priority afforded to the development of pupils' affective domain in the contemporary poetry class. The paper highlights the intrinsic unity of development in the cognitive and affective domains and argues the necessity for a simultaneous balanced and multifaceted approach to poetry pedagogy in the classroom. In addition this paper details the initial findings of an investigation into the teaching of poetry at post-primary level within an Irish context. It examines current trends in the methodologies utilised in the teaching of poetry and illustrates a marked imbalance in the development of pupils' based on research conducted over a two year period from 2007-2009 in Ireland. The paper highlights the significance of the reciprocal relationship formed between the aforementioned domains and argues the importance of an aesthetic approach to the teaching of poetry at post-primary level.*

## 1. Introduction

As technical rationalism and measurability of achievement have become the espoused philosophical underpinnings in post-primary educational provision in the last number of years [1, 2, 3], this imbalance in educational focus has permeated through the disciplines and become evident too in the contemporary poetry class. Poetic analysis has consequently become aligned with technical deconstruction [4, 5]; poetic inquiry replaced by exam 'achievement' [2] and aesthetic endeavour, frequently displaced by prosaic standardisation [6]. There exists an urgent need to redress this imbalance to focus not only on knowledge processing skills such as analysis and deconstruction in the poetry classroom, but concurrently and in tandem with the development of the affective domain, that which affords recognition to the emotional, the subjective, the creative and the innovative in our pupils.

## 2. The necessity for an interconnected approach to poetry pedagogy

Dewey [7] observed that the aesthetic cannot be separated from the intellectual, and for the intellectual to be complete it must bear the stamp of the aesthetic. Similarly Krathwohl et al. [8] express hesitancy about their taxonomy, dedicating an entire chapter to discussing the artificial separation of the affective and cognitive domains, and indicating that "nearly all cognitive objectives have an affective component if we search for it". Drawing from this the importance and benefits of recognition of the innate unitary relationship between the cognitive and affective domains cannot be overlooked. The reciprocal relationship born within the remit of these domains is illustrated in an extensive study conducted by Catterall et al. [9]. This research outlines the beneficial qualities of an all embracing approach to pedagogy. The research details the benefits drawn both cognitively and affectively from pedagogical strategies which facilitate multifaceted development. The research, carried out on more than 25,000 students, found that young people who regularly participated in the arts performed better than their counterparts who did not in measures of creativity, fluency, originality and elaboration. Pupils in 'arts-intensive' settings were also found to be strong in their abilities to express thoughts and ideas, exercise their imaginations and take risks in learning. In examining then the benefits, cognitively and affectively of poetry for the pupil therefore, recognition of their unitary and innate relationship is fundamental.

Pike [10], drawing on the writings of Wolfgang Iser and George Eliot who assert that the "highest of all teaching" is essentially aesthetic in character [11], argues that the pursuit of teaching to the learner as an individual rather than to specific skills of individuals is realised in aesthetic teaching. According to Pike, "aesthetic teaching is not dominated by a concern to implement aims and objectives or to transmit knowledge in the formal didactic sense; it involves leading the way into a tradition or a way of working and a culture where personal growth is fostered". The realisation of an aesthetic approach to the teaching of poetry incorporating both the affective

and the cognitive while transcending the mere inventory of its parts holds the key to the development of pupils as critically engaged and creative thinkers.

### 3. Poetry teachers' perspectives

The following section of this paper details initial findings from a longitudinal research study which was started in 2007 and is currently being conducted on the teaching of poetry at Leaving Certificate Level in Ireland.

Post-primary education in Ireland generally starts at the age twelve and lasts for six years. There is a common programme followed by all students for the first three years leading to the Junior Certificate examinations. This is followed by an optional transition year which aims to advance the personal, social, educational and vocational development of pupils. Subsequently the senior cycle spans two years and concludes with the Leaving Certificate examinations. This research focuses on poetry teachers working within the remit of the senior cycle or Leaving Certificate years.

Thirty-seven post-primary schools and a total of ninety-three practising Leaving Certificate poetry teachers partook in this research. The purpose of this research is to conduct an exploration into the poetry teachers' perspectives on a range of pedagogical and professional topics. The findings of poetry teachers' responses in relation to their pedagogical methodologies are disseminated here. Claims outlined previously in this paper which summarise contemporary research in this field are supported by the initial findings of this on-going research study.

### 4. Methodology

This research uses the combined theoretical framework of the positivist and interpretative educational research paradigms in doing so this study takes a 'pragmatic research approach' [12] embodying the strengths of both qualitative and quantitative research. The study comprised two key phases; phase one was quantitative in nature and consisted of the completion of a self-administered questionnaire, containing 67 questions based on the central theme of teaching poetry at Leaving Certificate Level. The questionnaire was distributed to 50 post primary schools throughout the Republic of Ireland, from which participation from 29 (58%) schools was achieved. The key objective for this stage of the research was to obtain preliminary findings on the central research questions from a broad range of geographical and culturally diverse schools, which would serve to highlight areas of interest and relevance for phase two.

Phase two was qualitative in nature and consisted of detailed interviews with eight Leaving Certificate English teachers (n=10% of research cohort from phase one) from a gender stratified sample which resulted in seventy one pages of qualitative data. The purpose of this phase was to provide an in-depth inquiry into the emerging issues from phase one.

### 5. Research findings

This research first sought to establish the poetry teachers' perception of their professional role and identify the developmental aspirations of the teachers for their pupils. Research participants were not limited to a singular area; therefore the multifaceted nature of the teaching profession emerged in responses. 60% of poetry teachers noted the importance of the development of aesthetic appreciation amongst their pupils as part of their professional role, as detailed by one research participant:

"I associate poetry with almost like music. I consider poetry touching that extra dimension in a person's life. The aesthetics. It's a gift they're going to take with them for life. I think it should be treated differently to all other elements of the English course, as being almost like a gift that you can give them."

In addition a combined total of 42.5% of teachers felt that their purpose as a Leaving Certificate poetry teacher was to explain poems and help pupils pass exams. This focus on examination has however a subversive effect on the accomplishment of their primary ambition of the development of aesthetic appreciation in their pupils. As outlined by one teacher in relation to this dichotomy of ambition, "When it comes down to it we're working within the confines of the exam". Teachers' primary aims of inculcating an aesthetic pedagogy into the classroom were relegated to an aspirational ambition rather than an objective as outlined by another participant who noted, "It is very kind of exam orientated and you just have to make sure you've covered the poems for the exam and then I suppose ideally I like them to like poetry, and maybe even read poetry when school is over".

The relegation of affective and ultimately aesthetic focus in the teaching of poetry to the requirements of summative assessment emerged as a key area of focus in researching the methodological approaches adopted by the poetry teacher. The importance of the ensuing data is highlighted by a study conducted by Hanratty [13] which found that "enthusiastic teaching, necessarily predicated on the deployment of a wide range of teaching and learning strategies, was the key to successfully engaging pupils' in poetry lessons". The predominance of a 'traditionalist' approach to teaching poetry was

openly conceded by research participants who felt that the nature of curriculum assessment failed to provide space for a more aesthetic approach to the teaching of poetry. This research found that poetry teachers are unlikely to ask pupils to illustrate poems through an alternate expressive art form with over half (59%) of teachers rarely (26%) or never (33%) use this pedagogical teaching strategy. In addition research has found that drama-in-education provides a highly accessible medium through which the affective domain via personal and social development can be catered for [14], however 75% of poetry teachers surveyed 'never' (33%) or 'rarely' (42%) use this technique when teaching. While poetic composition too provides a rich terrain for the affective development of pupils, this permissible landscape is severely under utilised within the Leaving Certificate Irish context according to the research conducted. 67% of poetry teachers in this study 'sometimes/rarely' encourage pupils to write their own poetry and a further 17% of teachers asserted they 'never' ask pupils to write their own poems.

The *Leaving Certificate English Syllabus* in Ireland asserts that students must “develop an awareness of their own responses, affective, imaginative, and intellectual, to aesthetic texts” [15] in order to foster an aesthetic pedagogy in the classroom. Congruent to achieving this ambition in the teaching of poetry is a focus on the subjective response of the pupil to a poem. It emerged from this research that over half (52%) of the participating cohort 'always' ask pupils for a personal interpretation of a poem. A further 41% 'often' ask pupils for a personal response. However difficulties in terms of pupil self-efficacy and encouraging a subjective pupil response encountered by teachers in the teaching of poetry were also reflected upon. Teachers discussed at length the apparent dichotomy of focus required in subjective responses to poetry under the remit of the summative examination. As a result pupils sought to establish the 'correct' meaning and continually undervalued their subjective interpretation of texts according to participants. In conjunction with this finding too was a sense of dependency on the part of both poetry teacher and pupil for pre-scripted responses to questions on poetry, with exam pressure and time constraints being cited as the main instigating factors in this trend. As noted by one interviewee “An awful lot of students now want to be spoon fed with notes and you have this ridiculous situation then where pupils are learning off essays by heart for the leaving cert which is crazy. Where is the originality going to come in?” Similarly the use of response journals has been advocated as instrumental in the affective development of pupils [16], however 66% of poetry teachers who partook in this research do not use response journals in their class.

## 6. Conclusions: Finding a balance

As noted by O' Neill [17] “man does not live by cognition alone; his experience of the world is multifaceted”, therefore poetry cannot and should not be treated as a singularly cognitive form, but appreciated also for its effect on our nature as sensuous beings that feel, sense and have the power to be moved by the creative and artistic. An inculcation of this experiential recognition is necessitated in both the reading and writing of poetry. As outlined by McGahern [18];

“Unless technique can take us to that clear mirror that is called style – the reflection of personality in language, everything having been removed from it that is not itself – the most perfect technique is as worthless as mere egotism. To reach that point we have to feel deeply and to think clearly in order to discover the right words. Once work reaches that clearness, the writer's task is ended. His or her words will not live again until and unless they find their true reader”.

Acknowledgement of the sentiments expressed above is necessitated as “a poem is more than the sum of its parts; a poem's overall aesthetic unity, and critical evaluation of that unity, should transcend a mere inventory of its component parts, both formal and thematic” [13]. This ideology is aptly reflected in the following poem by Sylvia Plath:

**Admonition**  
 If you dissect a bird  
 To diagram the tongue  
 You'll cut the chord  
 Articulating song.  
 If you flay a beast  
 To marvel at the mane  
 You'll wreck the rest  
 From which the fur began.  
 If you pluck out the heart  
 To find what makes it move,  
 You'll halt the clock  
 That syncopates our love

The message in this poem is crucial in terms of poetry pedagogy and evokes the sentiments of Robert Frost's famous axiom, “Poetry is what gets lost in translation”. When reading poetry it is crucial to note that analysis without emotional awareness is as fruitless as emotion without critical engagement. In order to achieve engagement, encourage critical analysis and facilitate emotional development, this understanding must translate from theory to the classroom. As noted by Hanratty [13], “successful poetry lessons will draw attention not, primarily, to a poem's separate or discrete parts, but to its aesthetic effectiveness as a completed composition”. However despite this awareness, Eisner's assertions of a ‘cognitive culture’[1] resonate within the contemporary classroom with the growing ideology

amongst pupils that poetry can be 'solved' and necessitates a rational clear and single solution:

"Too often the students believe that the teacher is keeping the clue from them which causes discussions about poetry to turn into a closed guessing game when it should be a shared exploration of the words on the page." [19]

Whelan [20] discusses the value of achieving balance when engaging with poetry and the arts. He argues that balance should be sought between what he terms 'filiation' (that to which we are born) and 'affiliation' (that to which we aspire) in order to truly understand, create and engage with works of art, such as poetry. He asserts that "If we are too filiated, the pressure of proximity crushes us, as we become 'mired in attachments'. If we veer too far away, the excess of distance can make us light headed" [20]. It is the distance travelled according to Whelan that is the necessary 'elevation for liberal rationality' (ibid). Drawing on the assertions of Whelan, successful engagement with poetry in the classroom must acknowledge both a poem's artistic and analytical attributes. Stevens [21] too argues that subjectivity and objectivity should be treated as mutually beneficial rather than mutually exclusive and defines the objective of teaching poetry in the class as being via 'informed subjectivity'. The effective teaching of poetry should stimulate aesthetic development through a balanced recognition and incorporation of students' affective and cognitive responses to the world. This ideology of balance resonates skilfully in the poem 'Lightenings viii' [22].

The annals say: when the monks of Clonmacnoise  
Were all at prayers inside the oratory  
A ship appeared above them in the air.  
The anchor dragged along behind so deep  
It hooked itself into the altar rails  
And then, as the big hull rocked to a standstill,  
A crewman shinned and grappled down a rope  
And struggled to release it. But in vain.  
'This man can't bear our life here and will drown',  
The abbot said, 'Unless we help him'. So  
They did, the freed ship sailed and the man climbed back  
Out of the marvellous as he had known it.  
- Seamus Heaney

This poem is an exposition of the challenges facing a poet. It details the 'marvellous' of experiencing and creating poetry which is somewhat suspended above everyday experience but yet which does not lose itself in aesthetic qualities. Heaney himself commented on this poem:

"I was devoted to this poem because the crewman who appears is situated: between the ground of everyday experience and the arier realm of an imagined world. An essential thing- whether you're the poet or the crewman – is to be able to move resourcefully between these two

realms, not get yourself bogged down in quotidian, yet not to lose your head in the fantastic." [23]

Turning to the development of the teaching of poetry in post-primary education lessons can be learned from Heaney. Poetry is a deeply multifaceted subject which provides a permissible forum for the employment of a rich variety of pedagogical methodologies. As educators and poetry teachers we must proceed with an aesthetic vision, embracing all aspects of the poem in order to imbue an understanding of and affiliation with poetry amongst our pupils. In doing so, we pave way for the natural balance and unity between the domains to emerge. In conclusion as noted by Seamus Heaney in his *Redress of Poetry*, "poetry cannot afford to lose its fundamentally self-delighting inventiveness, its joy in being a process of language as well as a representation of things in the world" [24].

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## **Session 10: Teacher Education, Education Policy and Leadership**

Academic Optimism as an Individual Teacher Belief: A South African Experience  
(David Phathabantu Ngidi)

Quality Control Charts for Primary Four Pupils Science Marks  
(Faten S.M. Abd El-Hameed, Salah A.A. Emara)

Starting from Scratch: Critical Reflections on an Educational Reform Programme in St. Vincent and the Grenadines  
(John Lee, John Dwyfor Davies)

Transformational Leadership and Secondary School Improvement: The International School Study  
(Simeon A. Oladipo, Anne I. Fabiyi)

Another Country—Not My Own: Crossing Disciplinary Borders, Forging Alliances within the Framework of a CAC Initiative in the Sciences  
(Ingrid McLaren)

The Relationship between School Districts Administrators' Ethicisms and Personnels' Organizational Commitment and Job Involvement in Semnan Province  
(Nader Soleimani)

# Academic Optimism as an Individual Teacher Belief: a South African Experience

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## Abstract

*In this study, academic optimism as an individual teacher belief, comprising of teacher's sense of efficacy, teacher's trust in students and parents, and academic emphasis was investigated. Teachers' self-efficacy beliefs were measured using the short form of the Teacher Sense of Efficacy Scale (TSES). One subtest from the Omnibus T- Scale (OTS), the faculty trust in clients subtest, was used to measure teachers' trust in students and parents. One subtest from the Organizational Climate Index (OCI) that specifically focused on achievement press (otherwise known as academic emphasis) was used to measure academic emphasis. The findings indicated that teachers differed in the extent of their academic optimism. The findings also indicated that teachers' biographical variables, namely gender, teaching experience and teaching phase had no significant influence on their academic optimism.*

## 1. Introduction

Academic optimism is an important individual teacher characteristic. However, individual teachers are also likely to differ in their levels of academic optimism. Their levels of academic optimism may also be influenced by other factors such as individual teacher personal circumstances. Therefore, this study examines academic optimism as an individual teacher belief, taking these factors into account.

## 2. Literature Review

A number of studies have been conducted in other countries with the aim of understanding academic optimism [13], [15], [22]. Most of these studies have examined academic optimism as a property of the school made up of collective efficacy, trust in parents and students, and academic emphasis [13], [15].

A recent study by Woolfolk Hoy et al. have examined academic optimism at an individual teacher level (as an individual teacher belief), where teacher's sense of academic optimism is viewed as a latent construct comprising of three highly related concepts -

teacher's sense of efficacy, teacher's trust in students and parents, and academic emphasis [22].

In this case, academic optimism is defined as a teacher's positive belief that he or she can make a difference in the academic performance of students by emphasising academics and learning, by trusting parents and students to cooperate in the process, and by believing in his or her own capacity to overcome difficulties and react to failure with resilience and perseverance.

Teacher's sense of efficacy is defined as a teacher's judgement of his or her capability to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated [20].

Teacher's trust in students and parents includes feelings of benevolence, reliability, competence, honesty, and openness [14]. Conversely, academic emphasis refers to teachers' beliefs about academic success and their focus on academic.

In their study of 205, third and fourth grade teachers in the Ohio State of USA, Woolfolk Hoy et al. established that teachers' sense of efficacy, trust in parents and students, and academic emphasis combined form a general construct called academic optimism.

## 3. Research Rationale

Although studies on academic optimism have been conducted in other countries, very few, if any, studies have attempted to investigate teachers' academic optimism in the South African context. The present study intends to do that. More specifically, the present study attempts to find answers to the following research questions:

- What is the extent of teachers' academic optimism?
- Do teachers' biographical variables (gender, teaching experience, and teaching phase) have any influence on their academic optimism?



## 4. Methodology

### 4.1. Aims of study

The present study aimed at achieving the following objectives:

- To ascertain the extent of teachers' academic optimism.
- To determine whether teachers' biographical variables (gender, teaching experience, and teaching phase) have any influence on their academic optimism.

### 4.2. Hypotheses

The following theoretical hypotheses were formulated:

- Teachers do not differ in the extent of their academic optimism.
- Teachers' biographical variables (gender, teaching experience, and teaching phase) have no influence on their academic optimism.

### 4.3. Participants

South Africa has nine provinces, one of them is KwaZulu-Natal. There were four educational regions in the KwaZulu-Natal province in the time of investigation. In order to ensure that the results are not biased, a sample was drawn from each region. Simple random sampling was used to select one district from each region. A list of schools in each district was obtained. There were four randomly selected schools from each district. Therefore, the total number of selected schools was 16. These sixteen selected schools were used for drawing a sample of teachers for this study. Participants volunteered to participate in the study (Table 1).

Table 1. Distribution of participants according to biographical variables (N=280)

Gender		Teaching experience: in years					Teaching phase			
Male	Female	0-5	6-10	11-15	16-20	21+	F	I	S/FET	
80	200	18	86	86	60	30	112	79	89	

F = Foundation phase I = Intermediate phase S/FET = Senior/Further Education and Training phase

The Table 1 shows the distribution of teachers in accordance with their biographical variables, namely gender, teaching experience, and teaching phase. Out of 400 questionnaires that were distributed, 280 were returned, which is a 70% return rate.

## 4.4. Measures

The questionnaire was used as a research instrument for collecting data. The questionnaire was appropriate for eliciting and rating teachers' responses as well as for quantitative analysis of data. For the purpose of comparison, items similar to those used in the scales reported in Woolfolk Hoy et al., were adopted [22]. Therefore, Teachers' self-efficacy beliefs was measured using the short form of the Teacher Sense of Efficacy Scale (TSES); One subtest from the Omnibus T- Scale (OTS), the faculty trust in clients subtest was used to measure teachers' trust in students and parents; One subtest from the Organizational Climate Index (OCI) that specifically focused on achievement press (otherwise known as academic emphasis) was used to measure academic emphasis [21], [14], [12].

The other section (first section) included in the present study consisted of teachers' biographical information, namely gender, teaching experience, and teaching phase.

**4.4.1. Teacher Sense of Efficacy Scale (TSES).** This scale consists of 12 items, assessed along a 9-point continuum with anchors at 1-Nothing, 3-Very Little, 5-Some Influence, 7-Quite A Bit, and 9-A Great Deal, and is scored such that the higher the score, the greater the efficacy. The scale includes three 4-item subscales: *Efficacy for Instructional Strategies*, *Efficacy for Classroom Management*, and *Efficacy for Student Engagement*. Reliabilities in Woolfolk Hoy et al., sample was .92 for the full scale, .82 for management subscale, .89 for instruction subscale and .80 for engagement subscale. The internal-consistency reliabilities for this study, measured by Cronbach's alpha were .92 for the full scale, .83, .81, and .80 for management, instruction and engagement subscales respectively.

**4.4.2. Omnibus T- Scale (OTS).** The subtest of this scale consists of 6 items which are worded such that they facilitate looking at an individual teacher's trust in students and parents. The items are scored on a 6-point scale from "strongly disagree" (1) to "strongly agree" (6); the higher the score, the higher the trust. Woolfolk Hoy et al., established that the reliability in their study was .83. The internal-consistency reliability of this scale in this study, measured by Cronbach's alpha was .76.

**4.4.3. Organizational Climate Index (OCI).** The subset of this scale consists of 6 items which are worded such that they facilitate looking at academic emphasis from an individual teachers' perspective. The items are scored using a 6-point scale from "strongly disagree" (1) to "strongly agree" (6); the higher the score, the greater the academic emphasis. The reliability of this scale in

Woolfolk Hoy et al., study was .60. The internal-consistency reliability of this scale in the present study, measured by Cronbach's alpha was .76.

## 5. Procedures

The researcher personally administered the questionnaires to the participants. An explanation of the nature of the questionnaire and the purpose of the investigation preceded the administration.

For purposes of scoring the research instrument, several steps were followed. Since teacher's academic optimism (teacher efficacy, trust, and academic emphasis) was assessed by using the three scales, namely TSES, OTS, and OCI, therefore, in an attempt to fulfil the aims of this study, these scales were treated as one component of academic optimism in the analysis of data. Its internal-consistency reliability, measured by Cronbach's alpha was .89.

Given that the academic optimism consists of 24 items, with 24 as the lowest possible total score and 180 as the highest possible total score, in an attempt to determine the extent of teachers' academic optimism (aim number one) the individuals' total scores on academic optimism were classified thus: 24-76 indicating a low academic optimism level (LAOL), 77-128 indicating a moderate academic optimism level (MAOL) and 129-180 indicating a high academic optimism level (HAOL). Data obtained through this procedure were used together with those of teachers' biographical variables in order to meet the second aim of the present study.

In order to achieve the aims of this study, various statistical procedures were followed. The chi-square one sample test was used to ascertain the extent of teachers' academic optimism (aim number one) [2]. The chi-square test of independence was used to determine whether teachers' biographical variables (gender, teaching experience and teaching phase) have any influence on their academic optimism (aim number two) [11]. The chi-square test is appropriate for categorical data [1], [2], [3], [4], [9], [16].

## 6. Results

The Table 2 shows that there were no observed frequencies for LAOL group cell, therefore, it is advisable to collapse it.

Table 2. Respondents grouped according to academic optimism levels

	MAOL (77-128)	HAOL (129-180)
Frequencies	103	177
$\chi^2 = 19.557$ $df = 1$ $p < 0.05$		

With regard to the first aim, the chi-square test ( $\chi^2 = 19.557$ ;  $df=1$ ;  $p < 0.05$ ) indicated that significant difference was found between moderate academic optimism level (MAOL) and high academic optimism level (HAOL) groups (Table 2). This finding showed that teachers differ in the extent of their academic optimism. The two groups of academic optimism levels differed between themselves. Put differently, the existence of these two groups was not due to chance factors but was statistically significant. Therefore, the null hypothesis was rejected.

The results of analysis for the second aim reveal that no significant difference was found between males and females with regard to reported academic optimism levels (Table 3). This finding showed that gender had no influence on teachers' academic optimism. Any gender differences pertaining to the two academic optimism levels were due to chance factors, and not statistically significant. Therefore, the null hypothesis was not rejected.

Table 3. Gender and academic optimism levels

Gender	MAOL (77-128)	HAOL (129-180)
Male	32	48
Female	71	129
$\chi^2 = 0.498$ $df = 1$ $p > 0.05$		

The Table 4 also indicates that no significant difference was found among different years of teaching experience (0-5, 6-10, 11-15, 16-20, and 21 and above) with regard to academic optimism levels reported. This finding showed that teaching experience had no influence on teachers' academic optimism. Any teaching experience-related differences pertaining to the two academic

optimism levels were due to chance factors, and not statistically significant. Therefore, the null hypothesis was not rejected.

Table 4. Teaching experience and academic optimism levels

Teaching experience: in years	MAOL (77-128)	HAOL (129-180)
0-5	5	13
6-10	29	57
11-15	34	52
16-20	26	34
20+	9	21

$$\chi^2 = 2.955 \quad df = 4 \quad p > 0.05$$

The Table 5 also shows that no significant difference was found among Foundation phase, Intermediate phase, and Senior/FET phase with regard to academic optimism levels reported. This finding showed that teaching phase had no influence on teachers' academic optimism. Any teaching phase-related differences pertaining to the two academic optimism levels were due to chance factors, and not statistically significant. The null hypothesis was, therefore, not rejected.

Table 5. Teaching phase and academic optimism levels

Teaching phase	MAOL (77-128)	HAOL (129-180)
Foundation	36	76
Intermediate	31	48
Senior	36	53

$$\chi^2 = 1.757 \quad df = 2 \quad p > 0.05$$

## 7. Discussion

The findings reveal that teachers differed in the extent of their academic optimism. A high percentage (63%) of them reported a high level of academic optimism compared to those who reported a moderate

level (37%) (Table 2). None of the teachers reported a low academic optimism level. This means that the majority of teachers believe that, with the trust they have in parents and students, they are capable of teaching successfully.

The findings also reveal that the biographical variables, namely gender, teaching experience, and teaching phase, (Tables 3, 4 and 5), had no influence on their academic optimism. This means that gender, teaching experience and teaching phase are not significant factors that influence teachers' academic optimism.

## 8. Conclusion

Deducing from the findings of this study, teachers' academic optimism is high. Considering the demands of the new curriculum and outcomes-based education in our country, South Africa, teachers' development of the sense of academic optimism becomes crucial. Fortunately, optimism, including academic optimism, is an individual variable that can be learned and developed, therefore, if teachers can learn and develop it, they may be in a better position to deal with challenges of the teaching profession and their sense of academic optimism may also beget student academic optimism [18]. Given that this study is probably the first to examine academic optimism at the teacher level in South Africa; further similar research is proposed, even in the other countries, so that more light can be shed on the findings.

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# Quality Control Charts for Primary Four Pupils Science Marks

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## Abstract

*Total Quality Management (TQM) is a concept to establish standards and techniques that ensure the quality of products leaving and reaching any organization/ school through continuous actions rather than through one final inspection. The purpose of this study is to apply the mathematical control charts  $\bar{X}$  and  $\bar{R}$  to set public school's primary four pupils in the science classes in the Kingdom of Bahrain under control. We present a step by step algorithm for controlling pupil's level of marks in various Science skills and in midterm and final exams. This is done using a feedback of Total Quality Management in education and samples of student's marks to perform the necessary calculations.*

## 1. Introduction

The aim of this work is to find quality control charts  $\bar{X}$  and  $\bar{R}$  for primary four pupils Science marks. As a model, the authors chose randomly five classes, called A, B, C, D, and E from Oqba Bin Nafe'a primary boy's school in the Kingdom of Bahrain. Quantitative data were collected, from five Science teachers in the school who used different teaching methods in order to carry out this case study. The Statistical Process Control (SPC) [1], [2], [4], [5], [6], [7] was applied to analyze the data. Comparison of the effectiveness of the five teaching methods was obtained using the F-distribution.

## 2. Methodology: Research Design

This section describes the population of the study: the sample, the design of the study, and the procedures for data collection and analysis.

### 2.1. Time and Place of the Study

The population of this study consisted of grade four students in Oqba Bin Nafe'a Primary school for Boys in the Kingdom of Bahrain. The study was conducted during the fall semester of the academic year 2007-2008. The sample of the study consisted of (100) students, which were randomly selected from five different sections.

### 2.2. Procedure and Source of Data

The following procedures were conducted throughout the study:

- We got a letter from the University College of Bahrain, addressed to the principal of Oqba Bin Nafe'a Primary Boys School in the Kingdom of Bahrain asking for her approval and cooperation to use the marks of grade four students to conduct this work.
- When we got the permission, we began to meet with grade four teachers and asked for a copy of the student's fall semester marks for the academic year 2007-2008.
- Five sections from grade four in Oqba Bin Nafe'a Primary Boy's school were assigned to be used in the study, groups A, B, C, D, and E.
- The marks of the fall semester (2007-2008) were collected. The mark lists consisted of 30 to 33 students in each of the five sections. Twenty students from each section were randomly chosen to get a total of 100 samples.
- The maximum score was set to (20) for all the classes.
- The students marks were analyzed by the Statistical Process Control (SPC). Means and standard deviations were calculated. The upper class limit and lower class limit for both the  $\bar{X}$  and  $\bar{R}$ -control charts were obtained. The F-distribution was applied to obtain a comparison of the effectiveness of the five methods of teaching.

### 3. The adjusted marks before the mid-term exam

The collected marks before the mid term exam for groups A, B, C, D and E are given in this section with maximum score set to (20) for all of them.

In Tables 1, 2, 3, 4 and 5 show students marks for the five groups A, B, C, D and E, before the midterm exam distributed over five categories; knowledge and understanding, thinking/ inquiry/ problem solving, communication, application/ making connection and midterm exam. The  $\bar{X}$  and

range R of the marks were computed for each student.

**Table 1. Adjusted marks before midterm exam–group A**

Knowledge and understanding (Out of 20)	Thinking / Inquiry / Problem solving (Out of 20)	Communication (Out of 20)	Making Connection (Out of 20)	Mid Exam (Out of 20)	Mean $\bar{X}$	Range R
16	14.33	17.33	14	16	15.532	3.33
12	20	17.33	14.66	11.5	15.098	8.5
16	12.66	14.66	9.33	11.5	12.83	6.67
14	18.33	13.33	13.33	8.8	13.558	9.53
20	16	15.33	9.33	8.3	13.792	11.7
20	19	18	12	18.5	15.5	8
14	12.66	13.33	16	8.3	12.858	7.7
18	17.66	16	13.33	10.5	15.098	7.5
16	14.33	18.66	16	16.5	16.298	4.33
20	20	19.33	20	16.5	19.166	3.5
20	17.33	18.66	16	19.8	18.358	2.67
16	14.33	19.33	17.33	14.5	16.298	5
14	11.66	19.33	20	9	14.798	11
18	13.33	20	18.66	16.5	17.298	6.67
20	16	20	17.33	12.5	17.166	7.5
18	13.33	20	10.66	8.8	14.158	11.2
20	19.33	20	20	17.3	19.326	2.7
20	20	19.33	18.66	18.3	19.258	1.7
18	10.33	19.33	20	8.3	15.192	11.7
8.5	15.66	10	12	0	9.232	15.66
Total					310.814	146.56
$\mu = \sum X / N = 310.814/20 = 15.5407$					$R = \sum R / N = 146.56/20 = 7.328$	

**Table 2. Adjusted marks before midterm exam–group B**

Knowledge and understanding (Out of 20)	Thinking / Inquiry / Problem (Out of 20)	Communication (Out of 20)	Making Connection (Out of 20)	Mid Exam (Out of 20)	Mean $\bar{X}$	Range R
16	17.33	18	12	9.5	14.566	8.5
20	16	20	18.66	19.8	18.892	4
16	11.33	20	17.33	20	16.932	8.67
16	17.33	14.66	14.66	9.4	14.41	7.93
18	12	20	20	18.3	17.66	8
16	17	10.66	4	4.8	10.492	13
20	10.66	20	17.33	18.8	17.358	9.34
20	17.66	20	20	12.8	18.092	7.2
15	17.33	20	10.66	12.5	15.098	9.34
12.5	16	19.33	12	12.5	14.466	7.33
16	15.33	13.33	10.66	12	13.464	5.34
14	18.66	18.66	12	18	16.264	6.66
11	13.66	16.66	16	17.3	14.924	6.3
11	9.33	16.66	17.33	16.3	14.124	8
10	16	19	18.66	15.5	15.832	9
16	17.33	14.33	9.33	15.8	14.558	8
13	19.33	15.33	13.33	4.45	13.088	6.33
18	16	20	20	16.3	18.06	4
14	14.33	18.66	14.66	18.3	15.99	4.66
15	17.66	13.33	16	12.8	14.958	5.86
Total					309.228	147.46
$\mu = \sum X / N = 15.4614$					$R = \sum R / N = 7.373$	

**Table 3. Adjusted marks before midterm exam–group C**

Knowledge and understanding (Out of 20)	Thinking / Inquiry / Problem (Out of 20)	Communication (Out of 20)	Making Connection (Out of 20)	Mid Exam (Out of 20)	Mean $\bar{X}$	Range R
20	17.33	18	17	18.6	18.186	3
20	20	20	20	20	20	0
20	14.66	20	18	17.2	17.972	5.34
20	19.33	20	20	19.2	19.706	0.67
20	14	17	20	17.6	17.72	6
20	18	17	18	18.2	18.24	3
13.3	12.66	10	12	14.8	12.552	4.8
15.33	16.66	16	15	12.6	15.118	4.06
18.66	15.33	16	18	14	16.398	4.66
20	20	16	17	9.8	16.56	10.2
18.66	15.33	15	20	16.6	17.118	5
20	15.33	15	17	20	17.466	5
15.33	12.66	9	8	9.8	10.958	7.33
16	13.33	15	14	12.8	14.226	3.2
13.33	14	8	10	10.6	11.186	6
18.66	11.33	10	9	11.6	12.118	9.66
20	17.33	18	20	18	18.666	2.67
20	20	20	20	20	20	0
12	13.33	10	15	9	11.866	6
20	18.66	14	17	18	17.532	6
Total					323.588	92.59
$\mu = \sum X / N = 16.1794$					$R = \sum R / N = 4.6295$	

**Table 4. Adjusted marks before midterm exam–group D**

Knowledge and understanding (Out of 20)	Thinking / Inquiry / Problem (Out of 20)	Communication (Out of 20)	Making Connection (Out of 20)	Mid Exam (Out of 20)	Mean $\bar{X}$	Range R
12.66	12	10	11	9.4	11.012	3.26
18	14	13	15	18.4	15.68	5.4
18.66	16.66	16	17	17.4	17.144	2.66
16.66	15.33	10	12	12.4	13.278	6.66
20	20	20	20	20	20	0
18.66	17.33	16	15	17	16.798	3.66
16	15.33	14	15	16	15.266	2
20	20	20	20	20	20	0
13.33	12.66	15	17	20	15.598	7.34
12.66	12	9	11	11.6	11.252	3.66
20	16.66	17	16	17	17.332	4
20	20	20	20	20	20	0
19.33	16	16	18	16	17.066	3.33
20	12.66	12	13	4.6	12.452	15.4
16.66	15.33	13	14	11.8	14.158	4.86
20	20	20	20	20	20	0
12	12	9	8	5.6	9.32	6.4
20	18	20	20	19.6	19.52	2
20	16.66	20	20	19.4	19.212	3.34
20	17.33	20	20	19	19.266	2.67
Total					324.354	76.64
$\mu = \sum X / N = 16.2177$					$R = \sum R / N = 3.832$	

**Table 5. Adjusted marks before midterm exam –group E**

Knowledge and understanding (Out of 20)	Thinking / Inquiry / Problem	Communication (Out of 20)	Making Connection (Out of 20)	Mid Exam (Out of 20)	Mean $\bar{X}$	Range R
20	15.33	11	14	8.8	13.826	9
17.33	16.66	16	17	16.6	16.718	1.33
20	20	20	20	20	20	0
18.66	15.33	18	17	18	17.398	3.33
20	20	20	20	20	20	03.33
17.33	15.33	15	15	13.6	15.252	3.73
17.33	15.33	14	15	17	15.732	3.33
15.33	13.33	12	14	12.6	13.452	3.33
16.66	18	17	15	17.8	16.892	3
13.33	12.66	14	15	14	13.798	2.34
13.33	12	14	12	10.6	12.386	2.73
18	20	18	20	16.8	18.56	3.2
20	18.66	19	20	19.8	19.492	1.34
20	20	20	20	20	20	0
14	13.33	10	12	13.6	12.586	4
12.66	20	19	18	20	17.932	7.34
12.66	14.66	13	12	11.4	12.744	3.26
12.66	12	14	12	15.8	13.292	3.8
20	20	20	20	20	20	0
12.66	9.33	10	11	12.8	11.158	3.47
Total					233.276	61.86
$\mu = \sum X / N = 11.6638$					$R = \sum R / N = 3.093$	

**4. The adjusted marks after the midterm exam**

The collected marks after the midterm exam for groups A, B, C, D and E are given in this section with maximum score set to (20) for all of them.

Tables 6, 7, 8, 9 and 10 show students marks for five groups after the midterm exam. The mean  $\bar{X}$  and range R of the marks were obtained for each student.

**Table 6. Adjusted marks after midterm exam – group A**

Knowledge and understanding (Out of 20)	Thinking / Inquiry / Problem	Communication (Out of 20)	Making Connection (Out of 20)	Final Exam (Out of 20)	Mean $\bar{X}$	Range R
20	9.33	20	20	16.5	17.166	16.67
17	18.66	10	12	17.1	14.952	8.66
18.5	14	11.33	10	11.1	12.986	8.5
14	17.33	16	8	12.4	13.546	12.34
14	20	7.66	8	10.5	12.032	12
17.5	13.33	11.33	14	19.5	15.132	8.17
16	17.33	20	17.33	12.8	16.692	7.2
17	19.33	8.33	4.66	17.5	13.364	14.67
13	16	15.33	14	8.8	13.426	7.2
8	17.66	9	6	17.7	11.672	11.7
20	12	9.33	6	17.1	12.886	14
20	19.33	17.33	15.33	14.3	17.258	14
19	13.33	19.33	19.33	13.4	16.878	5.93
15	19.66	16	10	15.3	15.192	9.66
13.5	13.33	11.66	13.33	17.3	13.824	5.64
20	20	20	20	18.8	19.76	1.2
16	17.66	14	10.66	17.5	15.164	7

20	14.33	18.66	18.66	19.1	18.15	5.67
11	20	7.66	8.66	13	12.064	12.34
16	8.33	9.33	4.66	9.5	9.564	7.67
Total					291.708	190.22
$\mu = \sum X / N = 14.5854$					$R = \sum R / N = 9.511$	

**Table 7. Adjusted marks after midterm exam –group B**

Knowledge and understanding (Out of 20)	Thinking / Inquiry / Problem	Communication (Out of 20)	Making Connection (Out of 20)	Final Exam (Out of 20)	Mean $\bar{X}$	Range R
15.5	13.33	5.33	13.33	13.3	12.158	10.17
19	16	18.33	19.33	19.7	18.472	3.7
19	16	19.33	18.66	19.8	18.558	3.33
14	19.33	8.66	8.33	12.2	12.504	11
18	14.66	16.33	18.66	18.9	17.31	4.24
13	13.33	1.33	2.66	9.2	7.904	4.13
19	19.33	18.33	16.66	17.8	18.224	2.67
20	15.33	20	19.33	18.1	18.552	4.67
20	14.66	17.33	20	18.5	18.098	5.34
14	15.33	7.33	16.66	13	13.264	9.33
12	15.33	14.66	10.33	14.5	13.364	4.33
11	20	14	12.66	17.1	14.952	9
20	17.33	11.33	13.33	15.6	15.552	8.67
14	15.66	10	12.66	15.8	13.624	5.8
10	17.33	10.33	13.33	17.4	13.678	7.4
17	18.33	10	14	11.6	14.186	8.33
6	16	6.66	6.66	15.5	10.164	9.5
14	18.33	20	19.33	19.3	18.192	6
19	14.66	13.33	14.66	17.2	15.77	3.87
14	11.33	4	8	6.8	8.826	7.33
Total					293.352	128.81
$\mu = \sum X / N = 14.6676$					$R = \sum R / N = 6.4405$	

**Table 8. Adjusted marks after midterm exam –group C**

Knowledge and understanding (Out of 20)	Thinking / Inquiry / Problem	Communication (Out of 20)	Making Connection (Out of 20)	Final Exam (Out of 20)	Mean $\bar{X}$	Range R
20	16.66	16	20	17.6	18.052	4
20	20	20	20	20	20	0
20	20	18	19	18.4	19.08	2
20	20	18	19	16.8	18.76	3.2
20	19.33	19	20	18.3	19.326	1.7
18	16.66	17	19	17.8	17.692	2
11.33	10	9	9	12.7	10.406	3.7
18	19.33	17	18	16.6	17.786	2.73
13.33	12.66	15	17	16.7	14.938	4.04
20	20	19	18	19.6	19.32	2
12.66	13.33	12	13	17	13.598	5
16.66	13.33	16	15	19.1	16.018	5.77
12.66	13.33	10	9	15.4	12.078	6.4
13.33	12.66	12	12	15.8	13.158	3.8
12	11.33	8	9	15.2	11.106	7.2
11.33	10.66	9	10	13.6	10.918	4.6
20	18	18	19	18.6	18.72	2
20	20	20	20	20	20	0
10	8.66	7	9	16.8	10.292	9.8
18	18.66	17	18	16.3	17.592	2.36
Total					318.84	72.3
$\mu = \sum X / N = 15.942$					$R = \sum R / N = 3.615$	

Table 9: Adjusted marks after midterm exam –group D

Knowledge and understanding (Out of 20)	Thinking / Inquiry / Problem	Communication (Out of 20)	Making Connection (Out of 20)	Final Exam (Out of 20)	Mean $\bar{X}$	Range R
11.33	9.33	10	9	10.2	9.972	2.33
15.33	16.66	14	15	12.4	14.678	4.26
17.33	17.33	16	18	16.4	17.012	1.6
12	12.66	9	10	12	11.132	3.66
20	20	20	20	19.6	19.92	0.4
15.33	16.6	15	17	16	15.986	2
16.66	18	18	19	16.4	17.612	2.6
20	20	20	20	18.9	19.78	1.1
14.66	13.33	15	16	14.6	14.718	2.67
10.66	9.33	9	10	12.4	10.278	3.4
16.66	12.66	14	17	13.8	14.824	4.34
20	20	20	20	19.7	19.94	0.3
15.33	13.33	15	16	11.1	14.152	4.23
16	13.33	12	11	10.8	12.626	5
13.33	12.66	12	13	14.9	13.178	2.9
20	20	20	20	20	20	0
9.33	10	8	10	6.4	43.73	3.6
20	20	20	20	20	20	0
18	16.6	18	19	19.7	18.26	3.1
17.33	18	18	19	17	17.866	2
Total					345.664	49.49
$\mu = \sum \bar{X} / N = 17.2832$					$R = \sum R / N = 2.4745$	

Table 10. Adjusted marks after midterm exam –group E

Knowledge and understanding (Out of 20)	Thinking / Inquiry / Problem	Communication (Out of 20)	Making Connection (Out of 20)	Final Exam (Out of 20)	Mean $\bar{X}$	Range R
13.33	11.33	10	9	9.6	10.652	4.33
18	15.33	15	15	16.2	15.906	3
20	20	20	20	19.6	19.92	0.4
16.66	16.66	15	18	18.2	16.904	3.2
20	19.33	20	20	19.4	19.746	0.67
11.33	10.66	9	8	13.3	10.458	5.33
13.33	13.33	14	17	14	14.332	3.67
12	12.66	11	10	14.2	11.972	4.2
17.33	18.66	15	16	16.2	16.638	3.66
12.66	13.33	10	11	13.2	12.038	3.33
10	9.33	9	10	15.1	10.686	6.1
18	20	15	19	16.6	17.72	5
20	19.33	18	19	19.2	19.106	2
20	20	20	20	20	20	0
16.66	15.33	13	14	14.4	14.678	3.66
16.66	19.33	15	14	18.1	16.618	5.33
12.66	13.33	12	12	13.3	12.658	1.33
12	8.66	11	12	12.4	11.212	3.74
18	18.66	18	17	19	18.132	2
10.66	10	10	9	8.2	9.572	2.46
Total					298.948	63.41
$\mu = \sum \bar{X} / N = 14.9474$					$R = \sum R / N = 3.1705$	

### 5. Six sigma control limits

The statistical representation of six sigma measures quality quantitatively and how a process is performing near perfection. A six sigma defect is defined as anything outside of user specifications. Process sigma can easily be calculated using the following:

$$R \text{ (range)} = \text{Largest value} - \text{smallest value.}$$

It is easily to compute using  $\sigma = \bar{R} / d_2$ , where  $\sigma$  is the standard deviation of the population, the values  $d_2$  are given in Table (11),  $\bar{R}$  is the average for several samples (N), i.e.,  $\bar{R} = \sum R / N$ , and the standard deviation of the sample is known as  $\sigma_{\bar{X}} = \sigma / \sqrt{n}$ , where n is the number of items in each sample.

$\bar{X}$  - Chart:

$$UCL_{\bar{X}} = \mu + z \sigma_{\bar{X}}, \quad LCL_{\bar{X}} = \mu - z \sigma_{\bar{X}} \quad (z=1.96 \text{ for } 95\% \text{ confidence, } z = 3 \text{ for } 99.72\% \text{ confidence}),$$

where  $\mu$  is the average for several samples (N), i.e.,

$$\mu = \sum \bar{X} / N.$$

$\bar{R}$  - Chart:

$$UCL_{\bar{R}} = d_4 \bar{R}, \quad LCL_{\bar{R}} = d_3 \bar{R}$$

The notation  $d_2$ ,  $d_3$ , and  $d_4$  is widely used in the quality control literature for constants in Table 11 [3].

Table 11. The constants  $d_2$ ,  $d_3$ , and  $d_4$

Sample Size	$d_2$	$LCL_R$ Constant ( $d_3$ )	$UCL_R$ Constant ( $d_4$ )
2	1.13	0	3.27
3	1.69	0	2.57
4	2.06	0	2.28
5	2.33	0	2.11
6	2.53	0	2.00
7	2.70	0.08	1.92
8	2.85	0.14	1.86
9	2.97	0.18	1.82
10	3.08	0.22	1.78
11	3.17	0.26	1.74
12	3.26	0.28	1.72
13	3.34	0.31	1.69
14	3.41	0.33	1.67
15	3.47	0.35	1.65
16	3.53	0.36	1.64
17	3.59	0.38	1.62
18	3.64	0.39	1.61
19	3.69	0.40	1.60
20	3.74	0.41	1.59

Now we evaluate the six sigma control limits of each of the groups A, B, C, D, and E before and after the midterm examinations.



**Table 12. Ranges for  $\bar{X}$  and  $\bar{R}$  - charts**

	Range for $\bar{X}$ - chart	Range for $\bar{R}$ - chart
Adjusted marks before mid term exam – group (A)	$UCL_{\bar{X}} = 19.7302$ , $LCL_{\bar{X}} = 11.2912$	$UCL_{\bar{R}} = 15.4621$ , $LCL_{\bar{R}} = 0$
Adjusted marks before mid term exam – group (B)	$UCL_{\bar{X}} = 19.707$ , $LCL_{\bar{X}} = 11.2158$	$UCL_{\bar{R}} = 15.557$ , $LCL_{\bar{R}} = 0$
Adjusted marks before mid term exam – group (C)	$UCL_{\bar{X}} = 18.8827$ , $LCL_{\bar{X}} = 13.4761$	$UCL_{\bar{R}} = 9.7682$ , $LCL_{\bar{R}} = 0$
Adjusted marks before mid term exam – group (D)	$UCL_{\bar{X}} = 18.4242$ , $LCL_{\bar{X}} = 14.0112$	$UCL_{\bar{R}} = 8.0855$ , $LCL_{\bar{R}} = 0$
Adjusted marks before mid term exam – group (E)	$UCL_{\bar{X}} = 13.4449$ , $LCL_{\bar{X}} = 9.8827$	$UCL_{\bar{R}} = 6.5262$ , $LCL_{\bar{R}} = 0$
Adjusted marks after term exam – group (A)	$UCL_{\bar{X}} = 20.0619$ , $LCL_{\bar{X}} = 9.1089$	$UCL_{\bar{R}} = 20.06821$ , $LCL_{\bar{R}} = 0$
Adjusted marks after term exam – group (B)	$UCL_{\bar{X}} = 18.3759$ , $LCL_{\bar{X}} = 10.9593$	$UCL_{\bar{R}} = 13.5895$ , $LCL_{\bar{R}} = 0$
Adjusted marks after term exam – group (C)	$UCL_{\bar{X}} = 18.0237$ , $LCL_{\bar{X}} = 13.8603$	$UCL_{\bar{R}} = 7.62765$ , $LCL_{\bar{R}} = 0$
Adjusted marks after term exam – group (D)	$UCL_{\bar{X}} = 18.7079$ , $LCL_{\bar{X}} = 15.8585$	$UCL_{\bar{R}} = 5.2212$ , $LCL_{\bar{R}} = 0$
Adjusted marks after term exam – group (E)	$UCL_{\bar{X}} = 16.7729$ , $LCL_{\bar{X}} = 13.1219$	$UCL_{\bar{R}} = 6.6898$ , $LCL_{\bar{R}} = 0$

As an example, suppose we would like to test the performance of the last student in Table (1) among group A. The marks before midterm exam are: 8.5, 15.66, 10, 12, and 0, with a sample mean of exactly 9.232, and a range of 15.66. The  $\bar{X}$  - and  $\bar{R}$  - charts from Table (12) tell us that the student's marks appear to be outside the group specification.

## 6. F-distribution

In order to compare the effectiveness of the five methods of teaching Science for grade four students in Oqba Bin Nafe'a primary boy's school in the Kingdom of Bahrain, we chose a random sample of size four students from each group and computed their total marks for the term. The randomly selected marks for students were as follows, from group A: the 7<sup>th</sup>, 9<sup>th</sup>, 14<sup>th</sup>, and 19<sup>th</sup> students were selected, from

group B: the 2<sup>nd</sup>, 6<sup>th</sup>, 13<sup>th</sup>, and 20<sup>th</sup> were selected, from group C: the 5<sup>th</sup>, 7<sup>th</sup>, 15<sup>th</sup>, and 17<sup>th</sup> were selected, from group D: the 1<sup>st</sup>, 3<sup>rd</sup>, 16<sup>th</sup>, and 19<sup>th</sup> were selected, and from group E: the 2<sup>nd</sup>, 5<sup>th</sup>, 7<sup>th</sup>, and the 19<sup>th</sup> were randomly selected. From these groups the randomly selected students obtained the following scores (out of 200):

Method 1: 147.75, 148.62, 162.45, 136.28  
 Method 2: 186.82, 91.98, 151.68, 118.92  
 Method 3: 185.23, 114.79, 111.46, 186.93  
 Method 4: 104.92, 170.78, 200, 187.36  
 Method 5: 163.12, 198.73, 150.32, 190.66.

The means of these five samples are  $\bar{x}_1 = 148.775$  ,  $\bar{x}_2 = 137.35$  ,  $\bar{x}_3 = 149.6025$  ,  $\bar{x}_4 = 165.765$  ,  $\bar{x}_5 = 175.5$  and we would like to know whether the differences among them are significant. If  $\mu_1, \mu_2, \mu_3, \mu_4, \mu_5$ , are the means of the five populations sampled, we shall want to test the null hypothesis ( $H_0$ )  $\mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5$  against the alternative hypothesis ( $H_a$ ) that means are not all equal (consider the specific special case as  $(\mu_1 < \mu_2 < \mu_3 < \mu_4 < \mu_5)$ ). The mean of the means is obtained as

$$\bar{\bar{x}} = (\bar{x}_1 + \bar{x}_2 + \bar{x}_3 + \bar{x}_4 + \bar{x}_5) / 5 = 155.3985$$

and we determine the variance  $s_x^2$  of  $\bar{x}$

$$s_x^2 = [(148.775 - 155.3985)^2 + (137.35 - 155.3985)^2 + (149.6025 - 155.3985)^2 + (165.765 - 155.3985)^2 + (175.5 - 155.3985)^2] / (5 - 1) = 228.686$$

Now, to continue the analysis suppose the populations we are sampling can be approximately closely with normal distributions, and these populations all have the same standard deviation  $\sigma$ . With reference to our study this means that we are assuming that [5]:

(1) The test scores, for each method of teaching, are values of a random variable having (at least approximately) a normal distribution, and that (2) these random variables all have the same standard deviation  $\sigma$ .

With these assumptions, and if the null hypothesis  $\mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5$  is true, we can look upon five samples as if they came from one and the same normal population and, hence, upon the variance of their means  $s_x^2$ , as an estimate of  $\sigma_x^2$  and since

$$\sigma_x = \sigma / \sqrt{n} \text{ for samples from infinite population, we}$$

can look upon  $s_x^2$  as an estimate of  $\sigma_x^2 = (\sigma / \sqrt{n})^2 =$

$\sigma^2 / n$ , where n is the size of each sample. We can

look upon  $n \cdot s_x^2$  as an estimate of  $\sigma^2$ , and it is

important to note that this estimate is based on the variation among the sample means, we thus have

$$n \cdot s_x^2 = 4 \times 228.686 = 914.744$$

as an estimate of  $\sigma^2$  the common variance of these population. In most practical situations  $\sigma^2$  is not known and we have no choice but to estimate it on the basis of the sample data.

Since under the null hypothesis we assumed that the five samples come from identical populations, we could use any one of the sample variances,  $s_{x_1}^2$ ,  $s_{x_2}^2$ ,

$s_{x_3}^2$ ,  $s_{x_4}^2$ , and  $s_{x_5}^2$  as an estimate of  $\sigma^2$ , and we

could use their mean as

$$\frac{s_{x_1}^2 + s_{x_2}^2 + s_{x_3}^2 + s_{x_4}^2 + s_{x_5}^2}{5} = \frac{1}{5} [ \{ (147.75 - 148.775)^2 + (148.62 - 148.775)^2 + (162.45 - 148.775)^2 + (136.28 - 148.775)^2 \} / (4 - 1) + \{ (186.82 - 137.35)^2 + (91.98 - 137.35)^2 + (151.68 - 137.35)^2 + (118.92 - 137.35)^2 \} / (4 - 1) + \{ (185.23 - 149.6025)^2 + (114.79 - 149.6025)^2 + (111.46 - 149.6025)^2 + (186.93 - 149.6025)^2 \} / (4 - 1) + \{ (104.92 - 165.765)^2 + (170.78 - 165.765)^2 + (200 - 165.765)^2 + (187.35 - 165.765)^2 \} / (4 - 1) + \{ (163.12 - 175.5)^2 + (198.73.75 - 175.5)^2 + (150.32 - 175.5)^2 + (190.66 - 175.5)^2 \} / (4 - 1) ] = 1,176.41.$$

We now have the following

$$n \cdot s_x^2 = 914.744,$$

$$\frac{s_{x_1}^2 + s_{x_2}^2 + s_{x_3}^2 + s_{x_4}^2 + s_{x_5}^2}{5} = 1,176.41$$

It should be observed that whereas the first estimate measures the variation among the sample means, the second estimate measures the variation within the five samples. Now we apply the F-statistic which is used to compare the means of k samples of size n, the numerator and denominator degree of freedom are, respectively, k -1 and k (n-1).

$$F = \frac{\text{variation among the samples}}{\text{variation within the samples}}$$

Here,  $F = \frac{914.744}{1,176.41} = 0.7776$  this does not exceed

4.89, the value of  $F_{0.01}$  (from the table of values of F distribution with  $\alpha = 0.01$ ) for  $k - 1 = 5 - 1 = 4$  and  $k(n-1) = 5(4-1) = 15$  degrees of freedom, the null hypothesis of equal population means cannot be rejected. In other words, there is really no difference in the effectiveness of five methods of teaching Science for grade four in Oqba Bin Nafe'a primary boy's school in the Kingdom of Bahrain.

## 7. Conclusion

The grading process is one of the most sensitive functions in schools. The main focus of this study describes the Statistical Process Control (SPC) in more detail, including examples of how this technique can be applied to obtain quality control charts for primary four pupils' science marks in order to ensure quality assessment. Our findings also showed that the F-distribution is useful tool in comparing the effectiveness of science teaching methods

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# Starting from Scratch: Critical Reflections on an Educational Reform Programme in St Vincent and the Grenadines

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## Abstract

*The conditions under which children learn and teachers teach was clearly critical to what was and remains an ambitious programme. Only a minority of the primary school teachers taught in a room of their own the majority taught in classrooms separated by chalk boards and many of those classrooms contained three classes. These arrangements required very careful and ingenuous negotiations when teachers on the programme wished to engage in active, exploratory learning and dialogic teaching, and we will return to this point. Very few schools had specialist rooms for science or had computer laboratories. In brief the circumstances in which the teachers taught were already challenging and the programme presented them with even more challenges. This paper focuses on these challenges.*

## 1. Introduction

St Vincent and the Grenadines is an independent state in the Windward Islands of the East Caribbean. Traditionally, its main source of income has been agriculture and remittances. The largest agricultural export was – and remains bananas, which were largely sold in the United Kingdom. The effect of the GATT Agreement removing European subvention has had the dual effect of reducing the value of the crop but at the same time, as Dr Gonzalves of the Unity Labour Party has stressed, released the economy from its colonial ties. Currently, agricultural development is being assisted by Taiwan and part of this assistance is the training and education of a small number of Vincentians in Agricultural Science up to Master's Level.

Changes in the economic structure of both St Vincent and the Grenadines and the wider region have pointed to the need for educational reform, for instance, the 2007 report of the Organization of Eastern Caribbean States points to the need for more secondary graduates and higher quality vocational training. Until the introduction of free secondary education for all, the secondary system was dominated by a few academically elite schools whose graduates tended to enter traditional university disciplines. As with many post-colonial states, the study of law was often priorities (Dr Ralph

Gonsalves' original training to post-doctorial level was in political science but he subsequently entered the English Inns of Court and qualified as a barrister).

## 2. Politics and policy since 2001

The coming to power of the Labour Party in St Vincent and the Grenadines brought with it a deep and ongoing political and resource commitment to educational development. This was described as 'the Education Revolution'. "My government is committed to eliminating poverty, improving living standards, helping our young men and women find employment, fighting drug trafficking and abuse... and we see quality education as central to this," (Honourable Prime Minister Dr. Ralph Gonsalves, 2001). The policy desires of the government are the improvement of education at all levels within the state. The Unity Labour Party came to power in 2001 and as noted above, by 2005 had established free secondary education for all. In 2006 a new Education Act was promulgated which has far-reaching consequences for education in the state, although these consequences are still being worked through. For instance, the Act names the subjects and areas of study of the National Curriculum, - but the detailed documentation of many of these subjects is still in the process of creation.

One result of these far-reaching reforms was the identification by the Ministry of Education of the need for the in-service educational development of all teachers. To this end, funding was acquired from the European Union (EU) by the Ministry of Education to support a BA (Hons.) programme focusing on leadership, management and pedagogical reform and this programme has been delivered by the University of the West of England (here after UWE) in collaboration with the Ministry of Education in St Vincent and the Grenadines. This paper will principally address a description, analysis and evaluation of this programme that the rest of this paper.

## 3. Operation of the programme

The programme operated over two academic years. At the original inception meetings, it was agreed that the programme would be delivered

through 'blended learning'. All students in St Vincent would have access to UWE's extensive electronic library and each module would be partly delivered electronically using UWE's Black Board system. This constituted approximately 60% of instructional time, the other 40% being delivered in face-to-face workshops in St Vincent and the Grenadines. Throughout the life of the programme, all students were provided with regular electronic tutorials and detailed formative assessment on work in progress by staff at the University of the West of England. This process of 'blended learning' was also supported through monthly meetings between the students lead by the local Programme Director. We were fortunate that through the good offices of the Ministry, we were able to appoint a very highly respected retired education official who was well known to the students and inspired very high levels of trust and confidence in them.

The operation of the programme required that all students had regular and effective access to the World Wide Web. We were fortunate that the computer laboratory at the Girl's High School was made freely available for both face-to-face workshops and monthly meetings through the good offices of the Headmistress, Education Project Management Unit (EPMU) and the Ministry of Education. At the beginning of the programme, many primary schools had only recently been supplied with a computer and Web access. The Ministry encouraged students who did not already own computers to purchase and use them and they all did so.

The programme commenced with an induction workshop conducted during the first week of the school's Easter vacation. Subsequent face-to-face workshops took place in late July and August in each of the two years and the students willingly gave up their time to engage in the study – and this was over and above the professional development work they had to engage with during this period. Finally the students graduated in March 2009.

#### **4. Why dialogic teaching?**

In considering what the core of a programme leading to pedagogical reform the important question was can a form of classroom teaching be described which would be effective and lead to school improvement in an era of rapid change. As we note above like the majority of countries in the world teachers in primary schools teach their own class with some lessons taught by specialists. Second what had to be considered was the physical conditions under which most of the teachers taught and also consideration had to be given as to the possibility of major changes in those conditions in the near future. These two were pragmatic but very important considerations. What also needed to be considered were principles? What do we know about children learn? What kind of evidence is available showing that a form of pedagogy is more effective, efficient

and better enables children to learn under the conditions that schools already operate under.

In doing this we turned to the body of work published by Robin Alexander and others. Robin Alexander has spent considerable time working on pedagogy and on comparative education. In the case of comparative education he has shown how high quality learning and high quality teaching can be identified in a variety of national settings [1]. He argues caution in simply attempting to draw comparisons and assuming that not merely might lessons be learnt but direct policy and practice might be borrowed. Alexander provides a succinct and detailed argument about the nature of this kind of teaching and states it encourages children's autonomous learning, enables them to work collaboratively and promotes higher order thinking skills [2]. Data collected by Eke and Lee show skilful teachers in challenging circumstances using dialogic methods and through promoting independent learning while managing whole classes of thirty children [4]. After careful consideration the issue pedagogic reform was focused on varieties of dialogic teaching.

What was also recognised was that the teachers on the programme were expected not merely to change their own classroom practice but also lead their colleagues into change. Fullan makes a powerful case that teachers who are committed to change need to carry their colleagues with them [5].

It was therefore recognised that the programme should enable teachers acquire the skills of leadership and take a critical stance to its relationship to management.

#### **5. Data sets**

The data that this paper draws on are very varied. First we draw on the notes of the inception meeting conducted with the ministry and EPMU. This meeting set the nature of the programme and aimed to ensure that it met the needs of both the students and the system as a whole. We use verbatim quotes and summary from both the final report and the meeting notes. The meeting was attended by ministry officials, members of staff from EPMU, the local project director, the project director from UWE and another member of UWE's staff.

We also will draw on the programme of study and its learning outcomes against which students were asked to evaluate their progress as they proceeded during the course. These evaluative comments are backed up by achievement data that has been verified by UWE's examination boards and its external examiners. Alongside this we draw on lecturers notes which indicate the mode of learning and teaching adopted and some of the instructional materials made available on blackboard.

Impact studies were conducted by members of UWE teaching staff, a sample of principals, and two head teachers from England and the local project director. In addition as part of the programme each

student was required to produce a detailed reflective evaluation of their learning and a commentary on they felt their work had impacted on student learning in schools and how they had been able to influence their colleagues in the direction of pedagogical and other change.

The inception meeting and the establishment of the mode of teaching and learning.

The discussion at the inception meeting partly revolved around the way in which teachers could deal with change and more important engage in pedagogical change, The Permanent Secretary asked at inception meeting, “How will the programme ensure that students will engage with change and in particular changes in teaching and learning?” It was determined that the mode of instruction adopted by the programme should model good classroom practice particularly in relationship of the development of dialogic teaching. A good deal of the discussion was taken up by the consideration of what constitutes differentiation in the classroom and how that might become a major theme integrated into the programme. What the meeting established was that the programme should have integrated themes that would run through all modules. The themes to be established were, dialogic teaching, the nature of change and how to handle it, differentiation and special educational needs, leadership, management and the use of assessment in planning and implementing change. This proved to be challenging but in the end implementable. Assessment later was to prove more problematic in that the state sets an examination called Common Entrance Examination for pupils aged 11 years old. It is the gate to elite schools still, pupils in the state are ranked and the top group of girls and boys are then able to enter the Girls High School and the Boys Grammar School. The effect of this examination has been to focus attention on summative rather than formative assessment and thus it was necessary to continually return to issues of assessment throughout the modules.

## 6. Changing Teaching

It is commonly said that when teachers engage in professional development it effects them personally but there is little evidence of an overall impact in classrooms in their schools. We were concerned that the results of study by the 48 teachers would lead both to classroom and school improvement. It was emphasised that the purpose of the course was both practical and academic and the theories that they engaged with should be put into practice. All students had to write a reflective evaluation of their learning as a final piece of work and in those pieces they acknowledged that they needed to weld theory and practice.

“At first I found the use of action research hard but now I see it as part of my practice. I see not as a task but a kind of cyclic process that enables me to

improve my own practice through examining my practice for evidence”. (Julia)

“Until I had gone through the course I thought assessment was something we use to judge what children were capable of. But now I understand what TGAT means by 'at the heart of the educational process lies assessment' I now use assessment to inform my planning to find out that the children can do and where they can go next”. (Samuel)

The data we have from these final written pieces shows that the students had been able to use what they had learned to improve the quality of teaching in learning in their own classrooms in the first instance.

## 7. The Question of Assessment and Change

As we note above, the use of assessment that the teachers were used to was as a way ascribing children to particular schools or classes. They were very unfamiliar with the use of formative assessment to inform planning. Each module had as a component a requirement that the students engage in their classrooms in some kind of formative assessment and use the results of that in the planning of new learning. This was connected to the use of dialogic teaching. This is best illustrated by the changes that were made in the teaching of primary science. When we observed the teaching of science in schools it became very obvious that it taught entirely by “chalk and talk” methods. Children sat in rows and copied notes from the chalkboard, a change to exploratory and dialogic method was thus quite dramatic.

“Science is often regarded as an intellectual, practical, creative and social endeavour which seeks to help children better understand and make sense of the world in which they live by involving them in thinking and working in particular ways in the pursuit of reliable knowledge. The primary schools in St Vincent and the Grenadines have a long way to go with respect to science and instruction.” (Mel) Mel chose to get her pupils to study ecosystems and set out the principles by which they should learn.

“The values, which underpin this curriculum content, are as follows:

1. Students will be made aware of the factors that can bring about changes in the ecosystem both natural and manmade.
2. Through observation of plants and animals in their natural surroundings, students will be able to understand the premise behind their dependence on each other and why they cohabit.
3. Students will be able to understand the impact human activity has on ecosystems through investigation, evidence, and research.

4. Students will be motivated to take an active role in environmental protection.
5. Students will become aware of the fragile nature of ecosystems and how the destruction of a population can affect the ecological balance of the whole ecosystem
6. Students will understand that energy and materials can be transferred in an ecosystem, which enable each population of organism to thrive.
7. Students will be able to develop the right attitudes and skills to effectively care for their immediate environments and manage their ecosystems.” (Mel)

She then shows how she used assessment not simply to track progress but examine how the children were learning in particular she examined in detail the way they explored and how they supported each other through the use of talk. As she says at the end of her report, “now the children can learn independently, they know how to learn and not just in science.”

We have used the example of science because it was easier for the teachers to identify the kinds of processes they were using and they were also able to see it as a practical activity and that the children if they were to engage needed to discuss what they were doing. We now turn to a similar example from the teaching of mathematics but in this case Ron begins in his evaluation by identifying his own enthusiasm and commitment.

“When one thinks of the word ‘Mathematics’, one of the first things that comes to mind is numbers and the four basic arithmetic operations. This is a very narrow view of mathematics. It is a living, breathing concept that can be found all around us. We encounter it every day consciously or unconsciously through our involvement in various activities and although I don't think I'm a mathematician I have always loved the subject.”

Ron explains that he had found some aspects of geometry difficult himself until he came to it via 3D shapes and thus set out to change his teaching by using such objects.

“There are not enough opportunities provided by the present school's curriculum for students to explore 3D- objects, expect for the observation of the external properties and the drawing and cutting of

nets to make models of the objects. There are no 3D-models that I am aware of (expect for those that I have made) that can be taken apart to expose the internal angles then reassemble the parts to remake the whole.”

What Ron demonstrates is how critical reflection on his own learning alongside careful consideration of how the pupils were working lead him to change his pedagogy. He goes on to record how the pupils talked about the task and how they were able to support each other. Equally important he used the pupils own work and words to encourage his colleagues to change their own teaching.

## 8. Conclusion

We need to examine carefully the achievement of the students. In the first instance we can point to both retention and to achievement. We began with 48 students and ended with the same 48 a retention record of 100% in additional every student achieved a good honours degree and the classifications ran from 2:2 to 1st. We know of no other programme with these retention and achievement rates.

One aspect of the programme that was new to all but three of the students was the use of ICT and distance learning materials. Bernie said “I thought this was very scary and I'd never manage it but we all helped each other” We can say with confidence that all students are now confident and active users of ICT not just in their personal lives but also when they are able to have the hardware using it in their classrooms to enhance pupils learning. This is a major effect which has benefitted not just these teachers but has given them the confidence to encourage and help their colleagues.

Finally the impact of the studies we conducted showed that the students on the programme had made considerable contributions to school improvement in general. As one principal put it “She doesn't keep it up herself she tells everyone what's she is doing and helps other teachers to make plans and to improve.” In another school the principal stated that the way science and English were taught had been changed and this was the result of the work of two of the students.

Table 1A. Programme

<p>1.1. Section 2: Educational aims of the programme</p> <p>The underpinning values supporting the following aims are connected to improving the educational experience and achievement of primary school pupils in St Vincent and the Grenadines. The value of developing high levels of skills in literacy and numeracy are those that will enable pupils to proceed to secondary and tertiary education. It is the desire of the government to focus on educational change leading to improvement as both a human and economic value. The aims of the project and the details set out later in this document are the result of detailed discussions with the Minister of Education, the Permanent Secretary and Senior Education Officers.</p> <ul style="list-style-type: none"> <li>• strengthen the leadership and management in primary schools in St. Vincent and the Grenadines;</li> <li>• prepare participants to become leaders and agents of change within the education system;</li> <li>• generate an understanding of the differences between the concepts of leadership and management;</li> <li>• generate school improvement and school effectivity;</li> </ul> <p>1.2. Section 3: Learning outcomes of the programme</p> <p>The award route provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas: ...</p> <p><b>1A Knowledge and understanding</b> Learning outcomes Teaching, Learning and Assessment Strategies</p> <p>A Knowledge and understanding of:</p> <ol style="list-style-type: none"> <li>1. the nature of educational change in different national policy contexts;</li> <li>2. concepts of leadership and management as they relate to primary schools in St. Vincent and the Grenadines;</li> <li>3. school effectivity and school improvement;</li> <li>4. curriculum development;</li> <li>5. assessment and its functions including the raising of achievement;</li> <li>6. professionalism, responsibility and the law as it pertains to these concepts in St. Vincent and the Grenadines;</li> <li>7. changing role of the primary school principal.</li> </ol> <p>Teaching/learning methods and strategies:</p> <p>The programme models good practice and promotes meta cognitive understanding of teaching and learning processes. Strategies deployed cater for a variety of preferred learning styles and include: lectures; seminars; tutorials; directed study tasks including use of literature and reflective activities; research tasks; use of videos, case-studies, role-play, games and simulations. The distance learning parts of the programme make use of UWEonline and other appropriate IT systems such as an on-line tutorial system.</p> <p>The Deputy Project Leader for the programme is an experienced principal and government education officer and supports student learning during on-line periods as well as during face to face teaching.</p> <p>1: A portfolio documenting changes in leadership with respect to action in schools is used throughout the programme. The portfolio thus offers a way in which participants can reflect on learning and plan new activities.</p> <p>2: Assessment Strategies</p> <p>The programme models good practice and promotes meta cognitive understanding of assessment processes. Strategies deployed include: tutor-assessed closed-book, open-book and/or pre-seen examinations; tutor-assessed group and individual written and oral assignments; self-assessment and peer-assessment. The portfolio is assessed throughout the programme providing not just summative but formative assessment data for tutors and participants.</p> <p>Assessment is diagnostic, formative and summative, as appropriate. A common bank of assessment criteria is used throughout the programme to aid transparency and consistency in the assessment process, matching assessment clearly with the intended learning outcomes of the programme.</p> <p><b>2 B Intellectual Skills</b></p> <ol style="list-style-type: none"> <li>1. think critically;</li> <li>2. utilise reflection in the learning process;</li> <li>3. utilise their experience and reflect on it in a critical way;</li> <li>4. analyse, evaluate and synthesise information and ideas;</li> <li>5. utilise ideas in the development of a line of argument;</li> <li>6. make informed judgements;</li> <li>7. adapt thinking to new situations;</li> <li>8. integrate new principles and understandings;</li> <li>9. identify, articulate and analyse their own value positions and where relevant the value position of others in relation to their area of study.</li> </ol> <p><b>Teaching/learning methods and strategies</b></p> <p>Intellectual skills are developed in a variety of ways using the diversity of approaches as referenced. Active learning opportunities to apply knowledge in the development of intellectual skills are provided in all modules include evaluating evidence, analysing case studies, creating reports and presentations that require synthesis, engaging in discussions that require argumentation and exploration of values. Role-play, games and simulations are used alongside more linear and traditional modes to develop the range of skills.</p> <p>The Deputy Project Leader for the programme is an experienced principal and government education officer and supports student learning during on-line periods as well as during face to face teaching.</p> <p>A portfolio documenting changes in leadership with respect to action in schools is used throughout the programme. The portfolio thus offers a way in which participants can reflect on learning and plan new activities.</p> <p><b>Assessment Strategies</b></p> <p>The programme models good practice and promotes meta cognitive understanding of assessment processes. Strategies deployed include: tutor-assessed closed-book, open-book and/or pre-seen examinations; tutor-assessed group and individual written and oral assignments; self-assessment and peer-assessment.</p> <p>The portfolio is assessed throughout the programme providing not just summative but formative assessment data for tutors and participants. Assessment is diagnostic, formative and summative, as appropriate. A common bank of assessment criteria is used throughout the programme to aid transparency and consistency in the assessment process, matching assessment clearly with the intended learning outcomes of the programme.</p>
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**Table 2B. Programme**

<p style="text-align: center;"><b>2C. Subject/Professional/Practical Skills</b></p> <ol style="list-style-type: none"><li>1. identify relevant theoretical, professional and/or research based sources and use these appropriately in study;</li><li>2. plan and conduct research or enquiry in a systematic way using primary and/or secondary sources;</li><li>3. critically examine relevant experiences in relationship to the professional development of intending and practising principals;</li><li>4. develop and demonstrate a critical, ethical, reflective and effective orientation to their educational practices or the practices of others;</li><li>5. critically examine education policy both nationally and comparatively.</li></ol>
<p><b>Teaching/learning methods and strategies</b></p> <p>Subject/professional/practical skills are developed in variety of ways using the diversity of approaches as referenced. In particular research and enquiry tasks are frequently used in modules to develop research skills, and an active reading strategy is deployed to ensure students learn how to access and utilise sources effectively. This includes the use of a VLE and on-line materials. Peer reviewing of changes in education in participants schools will be supported by the Deputy Project Leader during on-line periods and by tutorials with UWE staff during face to face periods.</p> <p>Participants are expected to draw on data and action research material conducted in their workplace to contribute to assessment.</p> <p>The portfolio of evidence noted above is an important source of these data and is also assessed.</p>
<p><b>Assessment Strategies</b></p> <p>The programme models good practice and promotes meta cognitive understanding of assessment processes. Strategies deployed include: tutor-assessed closed-book, open-book and/or pre-seen examinations; tutor-assessed group and individual written and oral assignments; self-assessment and peer-assessment.</p> <p>The portfolio is assessed throughout the programme providing not just summative but formative assessment data for tutors and participants.</p> <p>Assessment is diagnostic, formative and summative, as appropriate. A common bank of assessment criteria is used throughout the programme to aid transparency and consistency in the assessment process, matching assessment clearly with the intended learning outcomes of the programme.</p>



**Table 2C. Programme**

<p><b>1</b>     <b><i>UTTAM-20-3, Social Justice and Education: A Sociological Perspective</i></b></p> <p>UTTGM-20-3, Leading and Managing the Team in St Vincent and the Grenadines            UTTGB8-20-3, Leadership and Management Development            UTTGKE-20-3, Professional and Statutory Responsibilities and the Law</p> <p><b>2</b>     <b><i>UTTGE3-20-3, Education and Training Policies for social regeneration in Europe and the Wider World</i></b></p>
<b>Core Modules:</b> Nil
<b>Optional Modules</b>
UTTGFU-20-3, Mathematics for All UTTGFW-20-3, Science for All UTTGFV-20-3, English: Meeting the Needs of All Pupils (Primary)
<p><b>1</b>     <b><i>UTTAM-20-3, Social Justice and Education: A Sociological Perspective</i></b></p> <p>UTTGM-20-3, Leading and Managing the Team in St Vincent and the Grenadines            UTTGB8-20-3, Leadership and Management Development            UTTGKE-20-3, Professional and Statutory Responsibilities and the Law</p> <p><b>2</b>     <b><i>UTTGE3-20-3, Education and Training Policies for social regeneration in Europe and the Wider World</i></b></p>
<b>Core Modules:</b> Nil
<b>Optional Modules</b>
UTTGFU-20-3, Mathematics for All UTTGFW-20-3, Science for All UTTGFV-20-3, English: Meeting the Needs of All Pupils (Primary)

## 9. Acknowledgement

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# Transformational Leadership and Secondary School Improvement: The International School Study

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## Abstract

*The school leaders are prime movers of change in the school system. The International School at the University of Lagos, Nigeria, is a case in point with 7 principals. Notably, three of these principals were appointed at crisis period to provide transformational leadership, which Berg and Slegers and Cheg claim is critical to meeting educational challenges in a changing environment. The study population consisted of 2, 100 participants from which the sample was drawn. Data generated from questionnaire administered were analyzed using descriptive statistics. The result revealed that (43%) of the school leaders were able to renew staff commitment and restructure the system towards its goal accomplishment. The paper thus recommends that the school system requires a leader who influences the behaviour of the group members in an important way especially during policy reforms. Findings of which, is expected to build a culture that focuses on continual improvement of educational programmes, teachers' capacities and students' learning. Though, transformational leadership makes a hard difference in non-educational organizations, but only a handful of studies in educational settings have been reported. This study will therefore be expanded in scope to investigate the influence of transformational practices on teacher effectiveness in future.*

## 1. Introduction

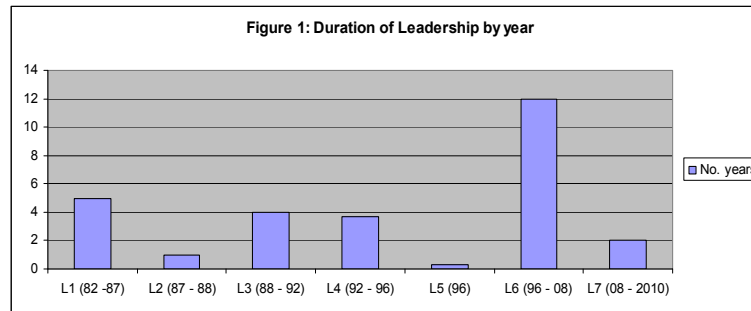
The Nigerian educational system is currently undergoing structural, administrative and curricular reforms, which is necessitated by the nation's quest for improved standards and achievement of Millennium Development Goals (MDGs). The MDGs emphasizes the inevitability of qualitative leaders who will deliver the desired results. For almost three decades now, leadership has been identified as one of the key components of good schools. Without exception, the most important single factor in the success of the school system is the quality of its leadership. This emphasis has greatly reflected in the new role and responsibilities of local schools management authorities at the lower level of education. In many systems, it has resulted

in the principal becoming manager of systems and budgets as well as leader of colleagues. Also, the increasingly competitive environment in which school operates has placed a much greater emphasis upon the need to raise standards and to improve the outcomes of schooling. Contemporary educational reform places a great premium on the effective leadership and management of schools. The logic of this position is that orderly school environment, that is efficient and well managed, provides the preconditions for enhanced student learning. The prime function of leadership for authentic school improvement is to enhance the quality of teaching and learning. The successful performance of any organization is often linked to the personalities of strategic leaders most especially during and after a radical transformation. These leaders are assumed to possess unique characteristics which are utterly different from and preferable to those predecessors and crucial for organizational growth. Sarros and Sarros viewed leadership as accomplishing goals and influencing relationship among leaders and followers who intend true changes that reflect their mutual purposes [31]. It was assumed that certain kind of leadership influences the behaviour of the group members in an important way to achieve beyond their expectations. It is also assumed that the kind of leadership which brings about changes and innovations and focuses on improvement efforts because it raises the level of awareness of workers to that which can optimally achieve organizational strategies and goals.

In recent time, there has been massive appointment and transfer of school heads within the Federal and State owned secondary schools. This reflected in the leadership changes in the International School, University of Lagos, which is the focus of this study. More importantly, the most significant challenge of the change in leadership in the school is to build and sustain a culture that focuses on continual improvement of educational programme, teachers' capacities and skills, and student learning. It is the belief of the management that school administrator as the primary instructional leader is sufficient to meet these challenges. This may have informed the frequency of changes in leadership in the study school where three of the administrators were appointed at crisis period to

**Key:**

- L1 – First Principal
- L2 – Second Principal
- L3 – Third Principal
- L4 – Forth Principal
- L5 – Fifth Principal



**Figure 1: Duration of Leadership in the International School**

provide transformational leadership. The study school is under the ambit of the university, though has a Management Board with a Chairman, in its 27 years of existence, it has had seven different principals.

## 2. Transformational Leadership and School Improvement

According to Leithwood and Jantzi, model of leadership more congruent with the requirement of cultural change is that of transformational leadership which focuses on the people involved, their relationship and requires an approach that seeks to transform feelings attitudes and beliefs [22]. This leader not only manages structure, they also purposefully seek to impact upon the culture of the school in order to change it. Resultantly, it would appear to be consistent with a desire to bring about school improvement, rather than simply change the school. Innovation, inclusion and conflict management have all been linked to transformational leadership behaviours. Berg and Slegers found that transformational school leadership plays a particularly crucial role in the development of the innovative capacities of schools [4]. These authors were in support of the assertion that such leadership is indeed to increase capacity of an organization for continuous improvement.

Organizational leadership involves the co-ordination of the work of the school through direction setting, allocating roles and establishing structures and maintaining an effective human support and organizational learning on the part of the school. It is deeper because learning skills that allow the learner and the teacher to take more control of their world. Across the range of public and private organizational settings, it is clear that effective leadership is infused by a commitment to clearly articulated values and beliefs. School administrators are expected to focus their attention on using facilitative power to make second-order changes in their schools. “Transformational leadership” provides such a focus. As Roberts explains [28]:

The collective action that transforming leadership generates empowers those who participate in the process. There is hope, there is optimism, there is energy. In essence, transforming leadership is a leadership that facilitates the redefinition of a people’s mission and vision, a renewal of their commitment, and the restructuring of their systems for goal accomplishment. While transactional leadership practices on the other hand, some claim, help people recognize what needs to be done in order to reach a desired outcome and may also increase their confidence and motivation. Transformational leadership provides the incentive for people to attempt improvements in their practices. This form of leadership is also referred to as “value added”. Transformational and transactional leadership practices are often viewed as complementary. The idea of transformational leadership was proposed in a mature form first by Burns and subsequently extended in non-educational contexts by Bass and others [1], [5]. Researchers, however, are only just beginning to make systematic attempts to explore the meaning and utility of such leadership in schools, and very little empirical evidence is available about its nature and consequences in such contexts.

However, there is a preponderance of literature indicating that transformational leadership can lead to substantial organizational rewards and that transformational leader behavior delivers an augmentation effect, that is, performance, effort, and satisfaction that rises above that derived by contingent reward leader behavior alone [2], [8], [37].

Transformational leadership has been positively correlated to leader effectiveness ratings, leader and follower satisfaction, follower efforts, and overall organizational performance [14], [18]. In addition, findings have been reported that suggest that transformational leader behavior is associated with employee commitment to the organization, trust in the leader, and positive organizational citizenship behaviors [6]. Further, there is evidence to indicate that transformational leadership is particularly effective during periods of turbulence and has produced empirical support in a high-technology

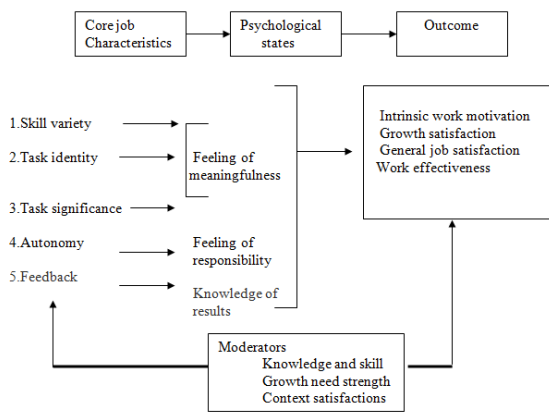
context [10], [16]. Recent research has also suggested that leaders who support emerging information technologies exhibit more transformational leader behaviors than those leaders who offer no such support [17].

### 3. Theoretical Framework

Transformational leaders mostly consider work design when they take over an organization. Thus, the Work re-designs/Job characteristics model was adopted for the expected change and innovations [12]. This model is a strategy for initiating organizational change, work redesign alters life in organizations in at least four ways:

- The basic relationship between the individual and what he does is changed;
- behaviour is alter directly
- opportunity for initiating other needed organizational chaps arise;
- the long term result makes the organization rehumanized rather than dehumanized the employees.

This approach combines and unifies Maslow’s need fulfillment theory of motivation, Herzberg’s concern for job re-design and intrinsic motivation, and expectancy theory into a theory of job design. The concept and generalization are as indicated in the Figure 2.



**Figure 2. Job Characteristics Model**

The theory specifies that an employee will experience internal or intrinsic motivation when the job generates three critical psychological states. i.e Degree to which the individual experiences the job has being valuable and worthwhile; the degree to which the individual feels personally accountable for the result of the work he performs; and the degree to which the individual knows on continuous basis how effectively he is performing his job. However, the job characteristics which are reasonably objective, measurable and exchangeable properties of the work, foster the psychological states and produce work motivation. Consequently, Hackman and Oldham

[12] proposed the generalization that the motivating potential score (MPS) of a job is the product of three factors: the average of the meaningfulness i.e. skill variety (SV), Task Identity (TI), and Task Significance (TS); autonomy (A); and feedback (F). Stated symbolically as:

$$MPS = \left[ \frac{SV+TI+TS}{3} \right] * A * F$$

### 4. Personal Characteristics of Transformational Leaders

The personal characteristics of transformational leaders have also been the topic of research [9], [19], [30]. Tichy and DeVanna conducted face-to-face interviews with some of America’s best-known transformational leaders (for example, Lee Iacocca, Jack Sparks, and Robert Stemple) [33]. Their observations led them to suggest seven common characteristics that these leaders seemed to possess that differentiated them from transactional managers. First, they identified themselves as change agents. Their professional and personal image was to make a difference and change the organization for which they had assumed responsibility. They were compared to athletic coaches that took over a troubled program with the intent of making them champions. They embraced the accountability of transforming the organization.

Transformational leadership is about change and innovation. In addition, each of these leaders demonstrated courage. They exhibited the willingness to take risks and challenge the status quo in the larger interest of the organization. They demonstrated the emotional courage to reveal truths, The Changing Face of Leadership: The Influence of Information Technology that others did not want to hear. A third characteristic was a strong belief in people. These leaders were very powerful but tended to avoid an autocratic style. They were sensitive to the needs of their followers and worked to empower their subordinates. Each played the multiple roles of cheerleader, coach, counselor, and leader as they attempted to unite different personalities into a singular organizational mission. These transformational leaders were also value driven. Each person interviewed could articulate a set of core values and exhibited behaviors that were consistent with those beliefs. Another characteristic shared by these leaders was their quest for knowledge. They were all dedicated life-long learners. They viewed past mistakes as learning experiences. Even at their lofty status, this group remained adaptable in their attitudes and approaches. A sixth common characteristic was their ability to deal with ambiguity and uncertainty. They had little

difficulty coping with an ever-changing environment. They were able to gracefully balance the emotional and cognitive aspects of problem solving. Finally, each of these leaders was a visionary. Not only were they able to dream, they could translate those dreams into images and symbols that allowed their followers to share them. The ability to draw others into the vision is a critical component of transforming leadership. Bass asserts that effective leaders must have this ability to influence the attitudes and behaviors of their followers [2].

It is extraordinary how closely these characteristics match the types of leadership previously suggested by those examining the leader-follower dyad in high performance IT teams. Clearly, in this new management landscape of technological change and innovation, organizations need transformational leadership [34]. When discussing the initiative to align the human side of IT with proper leadership at 3M, Roepke [29] speaks to the organization's desire to have their employees move from a transactional psychological contract (i.e., short-term exchange of benefits) to a relational psychological contract (i.e., long-term, mutually satisfying relationship). It is obvious that he is advocating transformational leadership. Klenke believes that in IT teams, transactional leadership is "likely to be limited by a technical perspective which sees technological change as needing primarily technical problem solving skills, with little attention to interpersonal skills and organizational consequences" [20]. Transformational leadership, on the other hand, requires considerable people and conceptual skills to overcome resistance to change and facilitate greater benefits from the investment Einstein and Humphreys in ITs [3]. Klenke states that depending upon the task and the development stage of an IT team, the leader(s) should exercise the full range of leadership styles ranging from autocratic to transformational leadership [20]. This full range of leader behavior is an integral component of our new model for influence in the current high performance IT context.

## 5. Research Rationale

This study aimed at identifying some transformational leadership techniques that enhance school improvement. It also sought to investigate the perceptions of staff regarding the leadership practices of the school, and lastly to examine

principals demographic variables and their impact on leadership behaviour.

### 5.1. Research Questions

- What are the transformational techniques required to improve teaching-learning in the school?
- What are the perceptions of staff regarding leadership practices of the school?
- What impact do principal's demographic variables have on his/her leadership behaviour?

### 5.2. Method

The research design adopted for this study was the evaluative case study. This design sought to explore the extent to which educational objectives/programme objectives of the school have been achieved. The study population comprised a total of 215 academic including 45 non-academic staff and 1,885 students in the two levels (junior and senior schools). Of this, only staff who have spent at least 10 years and above were involved in the study. Two sets of questionnaire, (a 23-item and a 10-item) were used to elicit information from the experienced participants. The descriptive statistics was employed in the analysis of the data generated.

## 6. Analysis

**Table 1. Analysis of the Organization and Process Factors in Effective Schools Formular**

Items	Highly Contributory	Moderately Contributory	Insignificant	No Contribution	Total (%)
Strong principal leadership	68 %	15%	5%	2%	100
High expectations for students' achievement	72%	12%	5%	1%	100
Emphasis on basic skills	81%	11%	4%	4%	100
Orderly environment	75%	19%	4%	2%	100
Frequent and systematic evaluation of students	91%	4%	5%	-	100
Instructional leadership	86%	5%	6%	3%	100
School site management	86%	10%	4%	-	100
Planned and purposeful curriculum	78%	14%	5%	3%	100
Staff stability	80%	8%	8%	4%	100
Staff development	86%	8%	5%	1%	100
Time on task	62%	16%	15%	7%	100
Parental support and involvement	69%	15%	10%	6%	100
District support	76%	11%	9%	4%	100
Orderly climate	71%	9%	15%	5%	100
Clear goals and high expectations	68%	20%	8%	4%	100
Parent participation	70%	12%	10%	8%	100
Shared governance	85%	8%	7%	-	100
Academically rich programmes	64%	14%	17%	5%	100
Skilled use and training of teachers	88%	6%	6%	-	100
Personal attention to students	86%	8%	6%	-	100
Student responsibility	90%	5%	5%	-	100
Accepting and supporting environment	85%	5%	8%	2%	100
Teaching aimed at preventing academic progress	87%	7%	5%	1%	100

Adapted from Wayne and Cecil [36].

**Table 2. Analysis of Ratings of the Seven Principals of the Sample School in Organization and Process Factors**

Items	L1	L2	L3	L4	L5	L6	L7
Strong principal leadership	65%	68%	70%	52%	75%	58%	80%
High expectations for students' achievement	67%	64%	64%	70%	80%	75%	82%
Emphasis on basic skills	68%	71%	63%	58%	70%	60%	70%
School site management	40%	47%	65%	22%	45%	35%	78%
Planned and purposeful curriculum	60%	71%	69%	60%	69%	45%	70%
Staff development	30%	58%	61%	35%	67%	28%	76%
Parental support and involvement	48%	64%	72%	60%	65%	57%	75%
Shared governance	51%	67%	64%	38%	69%	42%	72%
Academically rich programmes	68%	62%	68%	58%	64%	60%	68%
Student responsibility	45%	60%	60%	62%	65%	51%	65%

## 7. Findings

Based on the responses of the participants, the following findings were revealed among others:

- Four core leadership practices that are necessary but not sufficient for success in any school context, namely: setting direction, developing people, job redesigning in the organization and managing the instructional programme were identified as techniques variously used by the Principals.
- Successful leaders facilitate organizational learning as a collaborative capacity building process, especially in ideal circumstances.

Capacity building results from simple-loop and double-loop learning that occurs from the interplay among personal abilities, interpersonal relationships, and organizational structures.

- A range of complex issues have been identified as requiring the attention of school leaders such as in the study school. These include poverty, violence, crime, decaying infrastructure, declining moral value, poor morale of staff, lack of confidence, lack of work ethnics, negative attitude to authority etc. The sample school is an elitist one, located in the University environment in the city of Lagos.

- Considerable differences were noticed among the so called transformational leaders and their predecessors. Gender, age, experience and qualifications played significant roles in their various achievements. A common starting point was effective management of school programmes. They restored discipline, created safe and orderly working environment, refurbishing facilities, ensured teaching supplies were adequate and that scheduling, reports and day-to-day operating procedures function efficiently. Emphases were placed on job redesigning and instructional supervision only by those Principal appointed for transformation.

## 8. Discussion

The leadership practices in the core areas were both contingent upon self (their own skills, aptitudes and dispositions) as well as the existing personal, interpersonal and organizational capacity of the school.

- Notably, most principals preferred to establish voluntary teams who worked on professional learning related to improving students' achievement or teams of volunteers who worked collaboratively to provide solutions to the unpredictable problems that constantly emerge in such challenging school environment.
- Our results suggest that transformational school leaders are in more or less continuous pursuit of three fundamental goals:
- helping staff members develop and maintain a collaborative, professional school culture
- fostering teacher development
- helping them solve problems together more effectively.

### 8.1. Maintaining a collaborative culture

In collaborative school cultures, staff members often talk, observe, critique, and plan together. Norms of collective responsibility and continuous improvement encourage them to teach one another how to teach better [13], [25]. Leithwood and Jantzi identified a number of strategies used by their leaders to assist teachers in building and maintaining collaborative professional cultures [22]. These strategies included involving staff members in collaborative goal setting and reducing teachers' isolation by creating time for joint planning. Bureaucratic mechanisms were used to support cultural changes; for example, leaders selected new staff members who were already committed to the school's mission and priorities. These school leaders actively communicated the school's cultural norms, values, and beliefs in their day-to-day interpersonal contacts; and they also shared power and

responsibility with others through delegation of power to school improvement "teams" within the school.

### 8.2. Fostering teacher development

Teachers' motivation for development is enhanced when they adopt a set of internalized goals for professional growth. This process is facilitated when they become involved in establishing a school mission they feel strongly committed to. School leaders can do their part by helping to ensure that such growth goals are clear, explicit, and ambitious enough to be challenging but not unrealistic. Feedback from colleagues about discrepancies between their goals for growth and their current practices can be especially helpful. School leaders can further enhance teachers' development when they give them a role in solving non-routine problems of school improvement within a school culture that values continuous professional growth.

### 8.3. Improving group problem solving

Staff members sometimes want to and often have to work harder in order to bring about any meaningful school improvement. Transformational leadership is valued by some because it stimulates them to engage in new activities beyond classrooms and put forth that "extra effort" [32]. But some study of transformational school leaders uncovered practices they used primarily to help staff members work smarter, not harder [23]. In this study of how such leaders solved problems in collaboration with teachers during staff meetings, we found that they ensured a broader range of perspectives from which to interpret the problem by actively seeking different interpretations, being explicit about their own interpretations and placing individual problems in the larger perspective of the whole school and its overall directions.

## 9. Conclusion

Effective leaders move team members to higher levels of self-control so that competent ones are empowered. This will enable them control their own responsibilities, lead their own components of the responsibility in coordination with other team members whose efforts are assisted by the leader. We believe that transformational leaders are needed in this period of turbulence created by emerging high-technology innovations especially in the delivery of service and management in the school system.



## 10. Future Work

Transformational leadership makes a hard difference in non-educational organizations, but only a handful of studies in educational settings, in addition to our own, have been reported. This study will therefore be expanded in scope to investigate the influence of transformational practices on teacher effectiveness.

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# Another Country - Not My Own: Crossing Disciplinary Borders, Forging Alliances within the Framework of a CAC Initiative in the Sciences

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## Abstract

*This paper outlines within the framework of action research, the process of implementing a Communication Across the Curriculum programme in the Faculty of Pure and Applied Sciences. It highlights the link between institutional context and the dialectical implications of merging the skills, agenda and focus of multidisciplinary teams while maintaining a balance of power. It is suggested that these challenges may be met by forging effective alliances with those who are intrinsically motivated to achieve a common goal, adopting a context-driven rather than a norm-driven approach, and applying creativity and resourcefulness within this context. Guidance for similar undertakings is offered and the direction of future work outlined.*

*"I soon realized that no journey carries one far, unless, as it extends into the world around us, it goes an equal distance into the world within"*  
-Lillian Smith

## 1. Introduction

The implementation of a Communication Across the Curriculum [CAC] project in the Faculty of Pure and Applied (FPAS) Sciences at the UWI by a Writing Fellow from the English Language Section, constituted a direct response to the UWI Strategic Plan 2007-2012 which had as its primary aim, producing graduates with attributes which include critical and creative thinking, and communicative competence.

It also represented an attempt to implement and expand on the 2006-2008 Writing Across the Curriculum (WAC) Project which was carried out in this Faculty. The outcomes of this project highlighted the need for writing proficiency to become an objective of all courses and for writing to be fully integrated into learning activities if proficiency in this area on the part of students is to be achieved.

Additionally it was strongly suggested that competence in writing be given due weighting in the assessment of course work and examinations.

Thus, the primary goal of this project was to design and implement a [CAC] programme within the Faculty of Pure and Applied Sciences which would help students move beyond "general academic writing or novice approximations of disciplinary writing to internalizing the communication-thinking practices of professionals in their field" [1].

Beginning with the Departments of Chemistry and Life Sciences, whose members had participated in the previous WAC project, the CAC implementation process was designed to involve the selection of four courses from each of these departments - two courses at Level 2 and two at Level 3. One course at each of these levels for each of these departments would be designated as writing intensive and the other as speech intensive.

These courses would be ones which are currently so positioned within the curriculum that most students are required to take them, and this would ensure the exposure of most students in these departments to a writing and speaking intensive course at Level 2 and 3.

Thus, the value of this initiative lay not only in its ability to provide insight into the developmental process of implementation, but also in its potential to further our goal of the campus wide infusion of communication skills within the curriculum.

Generally, the benefits of broadening the science curriculum to include reading, writing, speaking, and listening skills were seen as critical to enhancing academic achievement, attitude, confidence levels, and self-images. In this way, students would be afforded the opportunity of becoming independent, life long learners by active participation in their own learning as opposed to being passive note-takers

Further, such an infusion was viewed as being entirely consistent with the growing recognition on the part of educators of the value of communication in all disciplines. Indeed, helping students meet the target competencies of professional practice, teaching them effective teamwork and collaboration, and enhancing their ability to understand and argue with visual data are recognized as widespread needs, particularly in the field of science [2].

## 2. Literature Review

Communication, in particular writing, is undoubtedly a critical component of learning and assessment in all disciplines in higher education. In fact Bean [3] has contended that competence in writing enhances student learning and develops both their critical thinking and active problem-solving abilities and others such as Forsyth [4], and Stowers and Barker [5] have attested to good communication skills being a critical component to success in ones personal and professional life.

However, there continues to be a growing concern among academics about the writing competencies of students (Lillis and Turner [6]; Ganobcsik-Williams [7], and Byrne [8]) and particularly among science educators (Jerde and Taper [9]; Moore [10], and Samsa and Oddone [11]).

The latter group contends that generally, undergraduate students have not learnt to write effectively in scientific formats and that the majority of scientific writing problems observed are related to documents' organization, tone, clarity and concision. For this reason they have promoted a closer integration of writing with education in all disciplines not only to improve writing skills but also to facilitate better understanding of subject matter [12].

This challenge has been met to a large extent by the Writing Across the Curriculum (WAC) initiative which enables students' exposure to a variety of writing styles in multiple content fields while giving them the tools to synthesize, analyze, and apply course content in meaningful ways [13], [14].

It is important to note at this point that two theoretical strands are considered integral to the WAC movement. The first, which is the learning to write concept, promotes a closer integration of writing with education in all disciplines not only to improve writing skills but also to facilitate a better understanding of subject matter [12].

Other advocates of writing, such as Emig [15], Kelly and Chen [16] and Steglich [17] have suggested that writing encourages learners to become more actively engaged in the material being studied as they personally interact and integrate ideas into their ways of thinking. In a similar vein, Paul and Elder [18] have suggested that writing is critical to the learning process.

The second theoretical component, WID (Writing in the Disciplines), constitutes a subsequent evolution of the WAC approach and stresses the immersion of students in their disciplinary community where they are enabled to master the academic and professional conventions of discourse, knowledge and thinking appropriate to this community .

In providing further clarification, Pemberton [19] outlines the WID concept in the following:

A WID program ... has *professionalization* as its focus, a desire to teach students what it means to write, talk, and think as members of a particular discipline. The writing projects students undertake in these courses may be collaborative, but they are also, presumably, longer, more complex, more centred in the activities of a discipline.

Notwithstanding, the "strong text" theory implicitly endorsed by WAC/WID advocates has been challenged by others (Ochsner and Fowler ) [20] who contend that this approach does not take into account variant modes of learning and well established differences in how people learn (Gardener [21] ; Grasha,[22] ; and Dunn [ 23] ).

In a similar vein, Langer and Applebee [24] have asserted that if learning is to take place, writing is best coupled with other methods, and that generally the more methods used, the better. In fact, Penrose and Sitko [25] have contended that discussion, especially interaction with other students enhances the quality of writing. They have further posited that the teaching of writing has evolved over the past three decades to highlight the role of orality in improving writing, to include more collaborative work and to focus on the role of peers as an audience for student writing.

Thus, we viewed the inclusion of speech in our proposed programme, as complementary to the WID approach and also consistent with the position of many others in the field as it represented a more comprehensive technique for enhancing science students' communicative competence.

### 3. Analysis of Findings

The analysis of findings involves taking into account the extent to which projected outcomes have thus far been achieved. These outcomes were framed within the multi-phase context of the project.

First and foremost was the aim of developing an effective interdisciplinary collaborative model, which would ensure as far as possible, the successful establishment of a CAC programme in the science faculty.

The formulation of such a model has been reported by others such as Emerson et al. [26] to involve multiple challenges, some of which include an imbalance of power, difficulty in adequately integrating the skills of members of different disciplines and conflicting agendas.

Added to these difficulties would be the socio cultural dynamics of the institution itself particularly in the context of compliance and a tradition of non intra and inter- disciplinary collaboration.

Moreover another critical consideration for the Writing Fellow [WF] in forging meaningful and working alliances outside her own discipline was the lack of explicit institutional endorsement of the CAC programme. In fact, although the project was supported in word and deed by the Dean of the science faculty, through the allocation of funds, there was no general mandate to the science teaching staff to infuse writing and speech into their courses.

The implications of this came to be viewed as a 'mixed blessing': In one sense, the lack of explicit endorsement would possibly involve extra effort on the part of the WF in persuading the teaching staff of the merit of a CAC programme and also in inducing them to infuse writing and speech into their courses. It also meant that the WF would be "crossing borders" without the "shield" of administrative support which would in turn limit the "reach" of implementation.

And yet, in another sense, there were advantages to this "unsupported crossing", as given that the science staff generally would not be "forced" to incorporate speech and writing into their courses, there would perhaps be less resentment on their part as they would not feel that this initiative was being imposed on them.

As a consequence, those staff members who participated would do so on a voluntary basis, being intrinsically motivated, and committed to the cause of enhancing the communication skills

of their students. Such was the case with some members of the Chemistry and Life Sciences Departments who had embraced WAC pedagogy and subsequently integrated these strategies into the learning activities of their courses.

Members of these departments, as expected, responded favourably to the CAC initiative and this receptiveness led to the foundation being laid for a working interdisciplinary alliance between the WF and science staff.

Inextricably linked to the laying of this collaborative foundation however, were subsequent negotiations related to actual implementation. Such negotiations centred around the selection of courses to be designated as writing and speech intensive, the role of the WF and science staff in the implementation of CAC, the revision of course outcomes and assessment to accommodate infusion, and, most important, the allocation of time and 'space' in the current syllabus of courses selected for infusion.

These latter two considerations proved to be the most challenging, and a distinct drawback of a lack of formal institutional endorsement, as, in the first case, the revision of course outcomes and assessment had to be delayed as these were subject to administrative approval. In the second case, it was left to the discretion of the lecturers involved to decide how much time would be allocated to the infusion process, and where exactly in their course schedules such an infusion would occur.

It soon became clear that CAC implementation would not be a "one-off" occurrence as originally envisaged, but rather an evolving process characterized by a series of gradual steps situated within a context of negotiation.

This phase involved an at times, radical departure from preconceived notions on the part of the WF as to what should ideally constitute speech and writing infusion into courses. Such notions had been informed to a large extent by the 'norms' related to the design of and criteria for Writing Intensive [WI] and Speech Intensive [SI] courses, outside of our context, at universities overseas.

The WF was, however, compelled to adopt a context-driven rather than a norm-driven approach which called for flexibility and, the surrender of control, in many areas, to the science staff. For example, the original plan to designate two courses at Level 2 and two at Level 3 in each department (Chemistry and Life

Sciences) for writing and speech infusion at each level had to be modified.

In the case of Chemistry, only two courses were selected—one at Level 2 as WI and one at Level 3 as SI—for the Analytical Chemistry Major. The lecturers thought that these courses were the ones which would benefit most from infusion and additionally would capture the majority of students pursuing chemistry courses.

In the case of Life Sciences, the lecturers thought that students in Level 3 courses, the majority of whom were in their final year of study, should be the benefactors of two SI courses and one WI course. Thus, no SI course would be implemented at Level 2 and only one was designated as WI at this level. The rationale was that those at Level 3 who were about to embark on professions would be better prepared at the point of leaving by the infusion of writing and speech into their courses.

Speech instruction, as originally planned, would be delivered by a Speech Specialist who would prepare students in both chemistry and life sciences for the oral delivery of a project report at the end of the semester.

For both departments, the time allocated for speech infusion which had originally been recommended for at least 2 ½ hours per week over ten weeks was now limited to one hour per week over a seven week period for Chemistry and a six week period for Life Sciences.

Moreover, in the case of Chemistry, speech instruction would be ‘squeezed’ into 4-hour lab sessions as it was not possible to schedule a separate time for this undertaking. Similarly, speech sessions in Life Sciences were fitted into two hour tutorials.

As a result, the Speech Specialist would have some difficulty in achieving the recommended “15 minutes of graded oral communication assignments, a total that might include interpersonal, group, and/or oral presentational activities” [27].

Moreover, the components for the original schedule of speech instruction had to be either compressed or omitted to facilitate these time constraints. It was decided that students would gain access to these omitted components, via the on line system where these components would be uploaded to a special container.

Further, in spite of the changes in the SI schedule of activities, there was some level of conformity to criteria [27], which included “the demonstration of oral communication as an integral part of the course and the reinforcement of appropriate interpersonal, group, and/or

presentational competencies”. Additionally, the modifications thus far have led to a focused approach to content as well as an effective and efficient use of time.

Another instance of departure from the considered “norm” of a SI course was encountered in the area of the recommended weighting for oral communication assignments in proportion to course grades.

The recommendation is that at least 30% of the course grade be assigned to a variety of oral communication [27]. However, the time allocated to speech sessions did not allow for effective evaluation of in-class presentations, and additionally, the designated Chemistry SI course had only allocated 5% to the oral delivery component of the terminal project report and another 5% to the content of the report. The lecturers in this Department were reluctant to implement drastic changes to the current status as this would involve not only undergoing the formal process of gaining approval from a number of boards at the faculty and university level but also engaging in extended discussions with colleagues.

We subsequently arrived at a ‘hard won’ compromise for the current initiative where an additional 5% would be allocated to the oral component—3% for attendance and participation, and 2% from the content component which would now be worth 3%—resulting in 10% being given to the final oral presentation. The lecturers nonetheless have since committed to undertaking the required procedures to raising this weighting to at least 15% in the coming year and revising course outcomes to reflect speech infusion.

A similar situation was encountered in Life Sciences where adjustments had to be made to the weighting for the oral component, this time by changing the current allocated 10% to 15%.

The implementation of writing intensive courses in both Chemistry and Life Sciences also represented an appreciable departure from the recommendations of those situated in another context. For instance, guidelines/criteria for this endeavour as suggested by Bridwell-Bowles et al. [28] include regularly scheduled class time being designated for writing instruction and at least 50% of course grade being based on student writing.

Again as in the case of speech infusion, time constraints did not allow for extended time periods being allocated, nor was the current system of grade allocation conducive to conformity with this latter recommendation.

Once more, a compromise position had to be arrived at. In this case it was agreed that 3 –one hour writing workshops in areas such as planning, revision, and organization would be delivered throughout the semester. It was also agreed that the current 90:10 ratio of weighting of content and what was referred to as ‘quality of writing’ would be revisited (in the future) with a view to increasing the weighting of the latter to 20-25. Lecturers were also not willing to commit to requiring students to produce the recommended five written pages per week.

On the other hand, lecturers were more amenable to fulfilling the recommendations that students be given the opportunity to produce multiple drafts of writing for which feedback should be given and that writing should be integrated into courses [28].

In summary, the Writing Fellow found that although the ‘crossing of disciplinary borders’ involved many challenges, these were mitigated to a large extent by the support of those with whom alliances had been forged. Additionally, in applying a context based approach, to the implementation of the CAC programme, our team was better able to counter challenges and overcome the many hurdles resulting from the lack of institutional endorsement and support.

Experiences gained from this initial phase of the project will serve to inform its expansion into other departments in the science faculty and eventually to the entire campus.

#### **4. Contribution to Knowledge**

The action research described in this paper has offered much regarding the formulation of an effective interdisciplinary collaborative model and, relatedly, the implementation process of an academic programme. The model outlined is based on a ‘bottom up’ approach where, in the absence of institutional endorsement (‘top down’), mid/lower level academics take the initiative to implement and sustain programmes which enhance the quality of the student body.

Further, since this approach makes relatively more demands on the initiative and creativity of those involved than does the top-down approach, it is more likely to succeed if it is guided by the context in which implementation occurs rather than by the stated norms of what should obtain.

For this reason, participants involved in a ‘bottom-up’ approach need to be fully committed to achieving a common goal and willing to make concessions as required. At the same time, they

also need to be prepared to view the process as an evolving ‘work in progress’ rather than a ‘one-off’, finite activity.

It is anticipated that these views will provide guidance to those who intend to embark on a similar undertaking.

#### **5. Conclusion**

In concluding, the way in which effective interdisciplinary alliances are formed to enable the successful implementation of a programme depends on critical factors such as institutional involvement/endorsement, the culture of collaboration and compliance and the successful merging of mutual interests and agendas.

It also requires the willingness and flexibility of those involved in finding common ground for compromise in key areas. This, as has been demonstrated, requires a delicate balancing act which may involve in some instances the partial surrender of control by one party to the other, as well as the adoption of a practical and realistic approach to what is possible in the current context while not losing sight of the overarching ideal of what and how ‘it should be’.

#### **6. Future Work**

At the macro level, future work will involve the expansion of the CAC Programme to the Departments of Mathematics and Computer Studies and Physics and eventually to the entire campus.

At the micro level our work will focus on the evaluation and analysis of outcomes of implementation in Chemistry and Life Sciences. The method of analyzing these outcomes will involve the use of both quantitative and qualitative analytical procedures which will be applied as follows:

##### **Quantitative:**

- Survey instruments administered in the initial stages to gain information on students’ perception of and attitude to writing and speech and re-administered at the end of the relevant courses to determine if there has been any significant change in perception.
- Comparison between current performance in WI [writing intensive] and SI [speech intensive] courses and previous performance

in these courses before writing and speech infusion.

- Comparison between students' performance in WI and SI courses and performance as it relates to writing and oral presentations in other courses at similar levels.

### Qualitative

- Interviews with focus groups comprising of teaching staff and students;
- Documentation of each stage of the implementation process via video recordings, taped discussions, observation of WI / SI classes.

It is being anticipated that the publication of research emanating from this project will constitute seminal work in science education, which will gain attention and recognition from researchers regionally and internationally.

## 7. Acknowledgements

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# The Relationship between School Districts Administrators' Ethicism and Personnels' Organizational Commitment and Job Involvement in Semnan Province

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## Abstract

The purpose of the study was to explore the relationship between educational administrators' ethicism and personnel's organizational commitment and job involvement. The study used the descriptive (correlation) method of data collection. The participants in this study were 169 staffs (female =27, male =142) at school districts in Semnan province. Three instruments were used to collect data. Administrators' ethicism was measured by one self-designed questionnaire. The personnel's organizational commitment measured by the Mowday and et al (1979) organizational commitment questionnaire(OCQ) and the job involvement was measured by the Lodhal and Kejner job involvement inventory(JII). The data were analyzed by using the Pearson product – moment correlation technique and multiple regressions. The major findings were as follows: 1) A significantly positive relationship was found between total school districts' administrators' ethicism and staffs' organizational commitment and job involvement 2) A significantly positive relationship was found between four dimensions of administrators' ethicism (Individual, Organizational, Social, Legal) and staffs' organizational commitment. 3) A significantly positive relationship was found between four dimensions of administrators' ethicism (Individual, Organizational, Social, and Legal) and staffs' job involvement. 4) The multiple regression analysis indicated that administrators' social ethic behavior is a significant predictor of organizational commitment and job involvement.

## 1. Introduction

The term ethics is referring to principles or process of rationalizing towards exploration of what is right or wrong. Daft takes ethics as moral principles and values that refers to individual or social behavior to announce it right or wrong [4]. In other words, ethics in management contains principles and values that assess managers' behaviors and managers' decisions to be right or wrong. The

personnel will doubt whether the managers' functions are not supporting the accepted values and ethics if managers do not act ethically. They will not then be convinced to follow the managers. Ledbetter introduced four major approaches in ethics to facilitate organizational decision making by managers in his research are as follows [8]:

- **Utilitarianism ethics.** Utilitarianism, initially developed by Bentham in the eighteenth century then enhanced by Mill in the nineteenth century, is often viewed as the pragmatic or practical approach to solving problems and behavioral conduct. The basis of determination in a decision is to utilize common sense and to attain results that seek pleasure and avoid pain. When confronting a problem, an individual compares the alternative solutions and selects the one that provides the greatest overall pleasure [12].
- **Rule ethics.** Rule ethics, developed by Kant in the eighteenth century, position that rules provide the basis or standard by which to judge decision or actions. Thus, if a person abides by the rules, then it is purported that the individual has acted in a right manner. Emphasis and action determined are based on what an individual ought to do, which is based on objective and universally valid truths. These truths go beyond the civil law to higher laws "known to mankind for thousands of years" [6]. Kant believed it is the responsibility and obligation of every individual to learn such rules and then be guided by them to determine right and wrong [12].
- **Social contract ethics.** Social contract ethics, developed by Locke and Rousseau in the eighteenth century, consists of an agreement where an individual contributes to a community and that community contributes to the individual, each gaining a benefit. To be a part of the community, the individual is expected to be guided by morality, the set of ground rules for judging right and wrong, established and accepted by all members. These ground rules constitute the

social contract between the individual and the community [6].

- **Personalistic ethics.** Personalistic ethics, as purposed by Buber in the Twentieth century, focuses on an individual's conscience as the means by which to take action. The internal conscience and sense of guilt provide the moral guidance for determining right and wrong. Buber believed that one's personal convictions provide the standard for making a decision on what to do, and that a person must respond as a situation is confronted [12].

The case of ethics-oriented systems has long time been applied in survey research. In a research based on Grobs' theory, for example, Mohammadi found that managers in general are inclined and oriented towards higher ethical layers. and diagnostically, they have vision enough to understand superior values [14]. Qasemian in a research investigating the degree of the role of Hossmer's five ethical components, found that managers self-assessed higher than average in use of eternal laws, utilitarianism, task-oriented, and real distributive justice, yet lower than average in use of personal liberty [20].

In a review of ethical conceptions of managers and non manager (namely experts, teachers, seller in chief, secretaries, and labors) , M Siu andJonna came to find that managers have a higher rate of respect for ethical behavior compare to managers in other sectors. The results of their research show that the acceptability of unethical behavior will reduce as the income decreases. Employees in nonprofit organizations respect ethical standards with a higher rate compare to those in other organizations [16].

In such large education organizations where various departments and regions as well as local communities are involved, knowledge of attitudes among employees and providing them to change their attitudes toward improvement of organizational achievements has a great value. In the present research, organizational commitment and job involvement has been taken into consideration as two job attitudes. Job commitment is among job attitudes that will influence many great behaviors such as absenteeism and job dropout.

Mowday et al. stated that while several definitions of organizational commitment abound, a common theme that runs through all is committed individuals' belief in and acceptance of organizational goals and values. Such trust building enables employees to want to remain in the organization, thereby committing themselves to provide quality services in behalf of the organization [17]. Hence, organizational commitment serves as a "psychological bond" that

influences individuals to act in ways that are consistent with the interests of the organization [19].

Kanter described organizational commitment as the willingness to expend energy for, and display loyalty to the societal system. Such an attachment of an individual to a society forms a relationship that can be significantly self- expressive and creative, and thus, contributes to the success of an organization [7].

Meyer and Allen reviewed related literature and categorized organizational commitment as: (1) affective commitment, or the attachment to an organization based on emotional factors: (2) continuous commitment, or the attachment to an organization arising from perceived cost: (3) normative commitment, or the attachment to an organization deriving from elements related to moral issues such as perceived obligation[13].

Lee at al. defined organizational commitment as loyalty to the organization and the mobilization of all employees in the development of its goals, purposes, and infrastructure [9]. All of these definitions tap on positive emotions. They build positive energy for orchestrating and achieving company goals. Lodhal and Kejner stated, job involvement is internal construction of individual values in order to make proud of the job as well as making the job as a value in one's own psychological identity [10].

More on literature can be found on the relationship between ethical orientation and job attitudes among managers. For example, in his study, Attarian found that there was a positive and meaningful relationship between ethical environment and job satisfaction in organizations [1]. The results of a study conducted by Herrbach and Mignonac showed that ethical values among managers had a direct and meaningful relationship with distributive justice, organizational commitment, job satisfaction, and adaptive behavior of staff [5]. Lozada and Carmen showed that ethical functions, human motivations, and ethical interactions are among the factors influencing satisfaction among teachers and academics [11].

Okpara and Wynn conducted a research on the role of ethical climate on job commitment and job satisfaction in Nigeria. They found that there was a strong positive relationship between ethical climate and job commitment [18]. Carlson investigated the effect of ethical work environment, leadership solidarity, and conceived leadership support on personnel commitment. The study showed that each of the three variables, ethical environment, organizational support and leadership solidarity had positive and meaningful effect on organizational commitment [2]. Chyekoh and Boo studied the relationship between organizational ethics and organizational outcomes among the managers based

on justice theory and cognitive theory [3]. Mortazavi found that employees with a fatherhood and ethical conception of management style have stated to practice a higher rate of organizational commitment [15].

In general, we can conclude from the literature and previous research that job attitudes (organizational commitment, job commitment, job involvement, job satisfaction) have been taken both as independent as well as dependent variables. The present research is to study the relationship between managers' orientation towards ethics (as independent variable) and organizational commitment and job attachment (as dependent variables) among the personnel of education departments in the province of Semnan.

## 2. Research hypotheses

$H_1$ : There will be a significant relationship between administrators' ethical behavior and personnel's' organizational commitment.

$H_2$ : There will be a significant relationship between administrators' ethical behavior and personnel's' job involvement.

$H_3$ : Dimensions of administrators' ethical behavior are predictors for personnel's' organizational commitment.

$H_4$ : Dimensions of administrators' ethical behavior is predictors for personnel's' job involvement.

## 3. Method

The study used the descriptive (correlation) method of data collection. The participants, instruments and methods of data analysis are defined below:

### 3.1. Participants

The sample of the study consisted of 159 personnel's who worked in school districts in Semnan province. The majority of staffs were bachelor or master (68 per cent) and the majority of the sample had been working more than 16 years (65.4 per cent)

### 3.2. Instrument

**3.2.1. Organizational commitment.** The personnels' organizational commitment measured by the Mowday and et al organizational commitment questionnaire [17]. The 15 items in the scale describes feelings and perceptions of the employees toward their organization. A five-point Likert responds format ranging from strongly disagree to strongly agree be used to score each item.

**3.2.2. Job involvement.** The job involvement was measured by the Lodhal and Kejner job involvement inventory[10]. The 20 items in the scale describes feelings and perceptions of the employees toward their job. A five-point Likert responds format ranging from strongly disagree to strongly agree be used to score each item.

**3.2.3. Ethical Behavior.** A 40 item instrument which assesses staff's perceptions of Ethical *behavior* of administrators was used. This instrument assessed four *behaviors* of ethics; namely: Personalistic ethic, Organizational ethic, Social ethic and Rules ethic..All *ethical behaviors* employed a 5-point response format (Viz. strongly Disagree, Not sure, agree, and strongly agree).

The reliability two instruments were calculated at  $\alpha$  Cronbach. The Table 1 shows result of calculations  $\alpha$  Cronbach.

**Table 1. Cronbach  $\alpha$  for subscales**

subscale	N	$\alpha$
Personalistic ethic	25	0.845
Organizational ethic	25	0.789
Social ethic	25	0.724
Rules ethic	25	0.716
Ethic (total)	25	0.812
Organizational commitment	25	0.763
Job involvement	25	0.749

### 3.3. Data analysis

Data from the completed survey were entered into SPSS 11.5 (SPSS In., 2003) and product-moment correlation technique, and regression was conducted.

## 4. Results

The demographic characteristics of the respondents are summarized in Table 2. As can be seen from the table, 83.6 per cent of the respondents were male and 16.4 per cent were female. As much as 69.1 per cent were bachelor and master.

**Table 2. Demographic profile of respondents**

Characteristics	N	percent
<i>Gender</i>		
Male	133	83.6
Female	26	16.4
<i>Academic record</i>		
Less than bachelor	49	30.7
Bachelor	98	61.6
Master	12	7.5
<i>working background</i>		
< 5 years	15	9.4
5-15 years	40	25.2
16-25 years	74	46.5
> 26 years	30	18.9

The Table 3 shows the means, standard deviations and minimum and maximum values for ethic (all four dimensions), Organizational commitment and Job involvement.

Relationships between ethical behaviors and organizational commitment and Job involvement were measured by Pearson's correlation coefficient. The results are shown in Table 4.

**Table 3. Descriptive statistics**

Variable	Mean	SD	Min	Max
Personalistic ethic	4.11	0.638	2	5
Organizational ethic	4.22	0.667	2	5
Social ethic	4.08	0.648	1.7	5
Rules ethic	4.06	0.598	1.8	5
Ethic (total)	4.07	0.612	1.9	5
Organizational commitment	3.69	0.468	2.53	4.93
Job involvement	2.92	0.311	2.05	3.75

**Table 4. Correlation matrix among the instruction procedures and the dimension of burnout**

<b>In depended dependent</b>	<b>Personalitic ethic</b>	<b>Organizational ethic</b>	<b>Social ethic</b>	<b>Rules ethic</b>	<b>Ethic (total)</b>
Organizational commitment	r = 0.277 sig= 0.000	r = 0.318 sig= 0.000	r = 0.339 sig= 0.000	r = 0.324 sig= 0.000	r = 0.328 sig= 0.000
Job involvement	r = 0.319 sig= 0.000	r = 0.318 sig= 0.000	r = 0.374 sig= 0.000	r = 0.307 sig= 0.000	r = 0.344 sig= 0.000

p<0.01

The Table 4 shows that there is a significant positively relationship between administrators' ethical behaviors (each four dimensions of ethical behaviors) with organizational commitment and Job involvement.

The multiple regression analysis indicated that Social ethic is significant predictor of organizational commitment. The Table 5 shows the results of multiple regression analysis.

**Table 5. Result of multiple regression analysis**

Model	unstandardized		standardized	t	sig
	$\beta$	Std.error	Beta		
Constant	40.411	3.360		12.028	0.000
Social ethic	0.367	0.081	0.339	4.516	0.000

Model summary:  $R = 0.339$ ,  $R^2 = 0.115$ , Adjust  $R = 0.109$ , st. error = 6.62,  $F = 20.39$ , sig = 0.000

Predictors: (constant), social ethic

Dependent variable: Organizational commitment

The multiple regression analysis indicated that Social ethic is significant predictor of Job involvement. Table 6 shows the results of multiple regression analysis.

**Table 6. Result of multiple regression analysis**

Model	unstandardized		standardized	t	sig
	$\beta$	Std.error	Beta		
Constant	43.776	2.939		14.895	0.000
Social ethic	0.360	0.071	0.374	5.056	0.000

Model summary:  $R = 0.374$ ,  $R^2 = 0.140$ , Adjust  $R = 0.135$ , st. error = 5.799,  $F = 25.56$ , sig = 0.000

Predictors: (constant), social ethic

Dependent variable: Job involvement

## 5. Discussion

This study examined the connection school districts administrators' ethicism and personnel's' organizational commitment and job involvement in Semnan province. The findings of the research show that the degree of commitment of managers to the four dimensions of ethical behavior is higher than average. This finding supports those of Mohammadi and Qasemian; therefore, they have found managers to hold a relatively high degree of ethical orientation in the workforce [14, 20]. The findings of this study are also in support of the results of the findings of research conducted by Siu and janna that stated that managers are highly committed to ethical behavior [16]. No doubt in the results expected, yet it should also be stated that measuring the ethical behavior is very critical and requires precise tools, where if used it may lead to different results.

The present research showed that there was a positive and meaningful relationship between managers' ethical behavior and employees' job commitment ( $p < 0.01$ ). This finding supports the results of the research conducted by Mortazavi, Attarian, Chykoh and Boo, Carlson, Herbach and Mig and Opkara and Wynn [15, 1, 3, 2, 5, 18]. They also showed that the personnel who conceive a fatherhood style of ethical management hold a higher degree of organizational commitment; manager trust has a direct relationship with employees job commitment; communication style, consideration and initiating structure has a positive relationship with employees job satisfaction and job

commitment; ethical environment and leadership solidarity has positive effect on job commitment; In general, one could say, whenever ethics is disregarded by managers, a deep gap between managers and employees will be created; insecurity of ethical values among the personnel will then influence indirectly job commitment.

Other finding of study show that there is meaningful positive relation between manager's ethical behavior dimensions and employees' job involvement ( $p < 0.01$ ). This finding supports the results of the research conducted by Chye and et al, Herrbach and Mignonac, Lozanda and Carmen and Okpara and Wynn [3, 5, 11, 18]. They found out that a good organizational climate can increase job involvement and there are meaningful positive relation between organization ethical climate and job involvement. As a summery, it can be said that ethical values have meaningful positive effects on all organizational consequences. Ethical climate in one organization will increase staff's satisfactions, commitments and involvement. To make these findings clear we can say that manager's moralization will create a same orientation between his staffs and if this happen staffs attitude towards their job's commitments, involvement, and satisfactions will increase.

Regression analysis also showed that there was just the social ethics that could anticipate meaningfully the other two variables namely job commitment and job involvement. Individual ethics, organizational ethics, and legal ethics did not show to have any important role in the regression equation as regard to anticipating job commitment and job

involvement. In generalizing the findings of the present research, one may state that the foundations of social ethics are more oriented towards establishment of a culture whose roots can be found in the social communication within the organizations. This culture surely will have important role in decisions taken and behaviors accepted by the employees. It will as well lead to commitment and involvement of employees towards organization and themselves. However, the foundations of legal and organizational ethics are laid in laws, instructions, and regulations that should be necessarily obeyed, but may not have as much attraction and motivation as ethics in social contracts. This may be more significant when law, instructions and regulations will not be in the same direction with goals and needs among employees.

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## **Session 11: Math and ICT Education**

Ways of Viewing Professional Learning in Mathematics  
(Michelle A. Lang, Immaculate Namukasa)

ICT Use for Teaching and Learning among Primary School Teachers in Rural Areas of Nigeria:  
A Mixed Method Study  
(Manir Abdullahi Kamba, Yushiana Mansor, Ahmed Bakeri Abu Baker)

Evaluation of the Training and Development Agency for Schools' Funding for ICT in ITT Projects:  
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ICT and Educational Reform in Kazakhstan  
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Assessing the Self-efficacy of Science Teachers in Secondary Schools in the Free State Province  
of South Africa  
(M.A. Lekhu, S.N. Matoti)



# Ways of Viewing Professional Learning in Mathematics

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## Abstract

*This phenomenographic study investigated the ways in which teachers experienced professional learning in mathematics. In particular, it explored the ways in which teachers' conceptions of those experiences influenced how their professional learning was enacted in the classroom. Through anonymous open-response surveys, ten Grade 7 and 8 "intermediate lead math teachers" reflected on professional learning experiences that occurred regularly over a five-year period. Analysis of the data revealed four qualitatively different ways of viewing professional learning in mathematics: (a) as a source for resources, (b) as an opportunity to network with other teachers, (c) as an opportunity to deepen one's own understanding of the teaching and learning of mathematics, and (d) as a catalyst for change in classroom practice. The four categories were seen as inclusive and increasingly complex with the fourth category being the most comprehensive.*

## 1. Introduction

In the first author's role as a curriculum consultant over the past five years, she facilitated many professional learning opportunities for teachers of Grades 7 and 8 focused on mathematics reform. During this time, she observed that there appear to be differences among participating teachers in terms of their confidence and willingness to implement new instructional strategies.

The purpose of the present study was to uncover the various ways in which teachers experienced, understood, or conceived of the professional learning opportunities in which they participated. We asked: In what ways did teachers' conceptions influence how their professional learning was enacted in the classroom?

The professional learning in which teachers participated was ongoing and collaborative. It consisted of several learning series focused on resources, tools, and strategies for teaching mathematics through problem solving.

We define *teaching through problem solving* as an approach to the teaching of mathematics wherein the teacher poses an appropriately challenging

mathematical problem (task, question, exercise, or activity) to the class, students work collaboratively to solve the problem using tools and strategies that make sense to them, and the teacher then facilitates the sharing and justification of students' strategies and solutions in order to make connections among and highlight the important mathematical concepts in the problem [1].

Teaching through problem solving may be contrasted with what is commonly referred to as the traditional model of mathematics education, which is based on a *procedural-formalist paradigm* that holds that mathematics is an objective set of logically organized facts, skills, and procedures which exist apart from human experience [2]. Teaching through problem solving is based on a *cognitive-cultural paradigm* that takes mathematics to be a set of logically organized and interconnected concepts that come out of human experience, thought, and interaction [2]. Teaching through problem solving, then, requires a shift not only in some of the basic assumptions about the nature of mathematics and the nature of humans as learners, but also in the roles of both teacher and students.

For instance, more than simply encouraging students to solve and justify solutions to problems, teachers need, among many other requirements, to be able to build on students' existing mathematical knowledge (both formal and informal), and to interpret student responses, prompt multiple interpretations, and identify misunderstandings [3]. Mathematics pre-service and in-service programs aim to support teachers in meeting this challenge.

In a review article on professional development (PD) in mathematics, Hill [4] outlined six characteristics for effectiveness – that is, a program's ability to effect teacher change: (a) active learning; (b) mathematical activity; (c) collaboration; (d) a focus on student learning; (e) practice and reflection; and (f) the modeling of effective strategies.

Even when all of these characteristics are present in a professional learning situation, other factors, including their understanding of what it means to teach through problem solving, may impact whether and how teachers enact their professional learning in the classroom. To be sure, individual teacher beliefs,

values, conceptions, and efficacy for teaching all contribute to PD outcomes [5].

Teachers' assumptions about the nature of mathematics, its teaching and learning may impact what they do in the classroom. Lampert [6] argued that, for reform educators, there is a very different set of assumptions about what mathematical knowledge is and how it might be acquired. She highlights recommendations of reform documents that students should be making conjectures, abstracting mathematical properties, explaining their reasoning, validating their assertions, and discussing and questioning their own thinking and the thinking of others, activities that are not part of traditional mathematics lessons.

Teachers' conceptions about teaching, in particular, may significantly influence their instructional practice [7]. In a study of university teachers, Akerlind [7] identified two different conceptions of teaching: a *teacher-centered* conception of teaching, and a *student-centered* conception of teaching. For teachers with a *teacher-centered* understanding of teaching, attention is focused on what they, as the teacher, are doing in any teaching-learning situation. Conversely, with a *student-centered* understanding of teaching, academics' attention is focused on what the students are experiencing in any situation.

## 2. Research framework

This study used a phenomenographic approach. Phenomenography aims to "find out the different ways in which people experience, interpret, understand, apprehend, perceive, or conceptualize various aspects of reality" [8].

The most central characteristics of phenomenography are the explorative character of the data collection and the contextual analytic character of the treatment of data [9]. The outcome of a phenomenographic study is to ascertain a set of *categories of description* – the complex of possible ways of experiencing various aspects of a phenomenon [8], rather than describing various aspects of the phenomenon itself. The basic unit of description in phenomenographic research is a *conception* [11], although as Marton and Pong [11] state, various other terms, such as 'ways of experiencing', 'ways of seeing', and 'ways of understanding', have also been used.

Conceptions, then, are represented in the form of categories of description. However, these categories of description are not just a set of different meanings, but a logically inclusive structure relating the different meanings – the *outcome space* [10].

## 3. Methodology

This study involved a group of 28 teachers from one mid-sized school board in Ontario who participated as Intermediate Lead Math Teachers (ILMTs) in ongoing, collaborative professional learning over the course of one to five years. In this section, we briefly outline the activities that occurred during the year in which the study took place.

Seven half-day monthly sessions comprised the 7-8 *Mathematics Learning Network*, a learning series for ILMTs in the 2008-2009 school year. The focus of the sessions was developing a *Math-Talk Learning Community (MTLC)* [12] - a community in which students assist one another's learning of mathematics by engaging in meaningful mathematical discourse. ILMTs set personal, professional goals to develop one particular component of the MTLC in their classrooms and were provided with a journal in which to record their goals, next steps, questions and reflections as they monitored their progress.

Over the course of the learning series, ILMTs engaged in several learning activities: (a) developing their own MTLC together as they collaboratively solved and discussed open mathematical problems, (b) observing a MTLC in action via video clips, (c) collaboratively analyzing samples of their students' solutions to open mathematical problems, (d) reflecting both individually and in pairs on their practice, and (e) identifying instructional next steps to enhance both student learning and their own professional growth.

### 3.1 Data Collection

As a phenomenographic research study, the preferred method of data collection was open-ended interviews. However, due to the existing relationship between the researcher and the participating teachers, the ethics board at our university determined that, in order to avoid the issue of coercion, an anonymous online open-response questionnaire would replace face-to-face interviews.

All 28 ILMTs participating in the professional learning during the 2008-2009 school year who had been involved in ongoing PD in intermediate mathematics for one to five years were invited to participate in the online survey.

Response to the survey was limited, possibly due to tight schedules of teachers. To enable more meaningful analysis of teachers' experiences of professional learning, a request to use secondary data was approved. Online survey data, then, was supplemented with data from anonymous onsite professional learning surveys that had been completed by ILMTs who had participated in one of two additional intermediate mathematics learning

series that occurred during the 2008-2009 school year.

### 3.2 Teacher-Participants

The purposive sample for the study consisted of the 10 survey respondents, ILMTs who participated in at least the last year of the ongoing, collaborative professional learning in mathematics – 4 who completed both the online questionnaire and the onsite professional learning survey, and 6 who completed only the onsite professional learning survey.

### 3.3 Phenomenographic Analysis

As stated earlier, the goal of phenomenographic research is to describe the various ways that different people experience a phenomenon [8]. For the present study, the analysis first began with reading each individual online survey participant's responses as a whole, looking for key words or phrases that suggested that teacher's conceptions of mathematics professional learning.

Second, attention shifted from individual participants' responses to the meaning embedded in the phrases themselves. The phrases from all online survey participants were arranged by conception and sorted based on similarities and differences in conceptions of mathematics professional learning revealed in the phrases. Phrases that did not seem to fit within the established broader groups were examined and groups of phrases were rearranged until possible *categories of description* began to emerge.

Third, the emerging categories of description were validated by adding phrases from the onsite professional learning survey and sorting them based on the criteria recorded.

Fourth, recognizing that, in phenomenographic analysis, it is important to minimize any predetermined views about the nature of the categories of description [10], notes were made about the categories that had emerged and phrases were then re-sorted according to new criteria.

Fifth, the revised categories were evaluated against the criteria for effective phenomenographic outcome space: (a) each category reveals something distinctive, (b) categories are logically related, and (c) there are as few categories as possible [10].

Finally, the internal relations between the categories [11] were investigated in order to construct the outcome space.

## 4. Findings

During the analysis of the survey data, four different ways of experiencing mathematics professional learning emerged. A metaphor was assigned to each of the four, expressed in terms of the teacher participant. The four categories of description are: (a) seeing the mathematics professional learning as a source for new ideas, strategies, and resources: *the gatherer*; (b) seeing the mathematics professional learning as an opportunity to share and discuss with colleagues new ideas and strategies: *the networker*; (c) viewing the mathematics professional learning as an opportunity to deepen understanding of mathematics teaching and learning: *the internalizer*; and (d) viewing the mathematics professional learning as a catalyst for change in practice: *the enacter*.

### 4.1 Category A - The Gatherer

The goal of attending mathematics professional learning for *the gatherer* is to acquire new resources. Reviewing a prepared mathematics lesson, trying out the student tasks, and going away with a package that includes both the lesson and student handouts might exemplify the experience described in this category. The following phrase illustrates the way of understanding professional learning in mathematics represented by Category A.

Developing HOTS [Higher Order Thinking Skills learning series]: great ideas on how to deliver a unit with concrete ideas. Also good explanation as to why to include certain activities. Using manipulatives (i.e., algebra tiles) is great! (ILMT 6, onsite professional learning survey, Q2)

In summary, for teachers with this view of mathematics professional learning, the focus is on gaining new tools, methods or strategies for the teaching and learning of mathematics. All ten of the ILMTs in the present study demonstrated this conception of professional learning in mathematics.

### 4.2 Category B – The Networker

The purpose of mathematics professional learning opportunities, for *the networker*, is to exchange ideas and resources. Sharing and discussing ideas and strategies, collaboratively developing a mathematics lesson or unit, and participating in a *learning community* are characteristic aspects of the professional learning experience in this category. The following phrase illustrates the way of understanding professional learning in mathematics represented by Category B.

The ability to network in a professional learning community has been very valuable. . . . sessions

allow for feedback, fresh approach . . . [and] peer comments/input. (ILMT 4, online survey, Q19; onsite professional learning survey, Q2)

The focus on sharing with colleagues in Category B does not appear to exclude Category A's focus on obtaining resources. In fact, the acquisition of new resources and ideas is also seen as part of teachers' experience in Category B, thus suggesting an *expanded* conception of professional learning in mathematics. The way in which these two foci become integrated in Category B is illustrated in the following phrase:

[In the 2009-2010 school year, I would like the opportunity to] meet [*illustrating Category B*] and come up with complete 10-15 day units [*illustrating Category A*] before using as according to the [board's] sample long-range plans. (ILMT 8, onsite professional learning survey, Q3)

Although 8 of the 10 teachers involved in the study showed evidence of viewing professional learning in mathematics as both a source for new ideas, strategies, and resources (Category A) and an opportunity to develop and share ideas and resources with their colleagues (Category B), at least one teacher, ILMT 6, demonstrated only Category A.

### 4.3 Category C – The Internalizer

For *the internalizer*, the goal of participating in professional learning in mathematics is to deepen one's own understanding of mathematics and one's knowledge about the teaching and learning of mathematics. Teachers with this conception seem to see professional learning as an opportunity to reflect on their teaching practices and challenge what they know and how they teach. The following phrase illustrates the way of understanding professional learning in mathematics represented by Category C.

[Professional learning opportunities in mathematics] provided me with the experience I need to be able to understand how students learn and how to guide them if they are having difficulty . . . I had a better understanding of how the process of teaching through problem solving looked and felt from all of my PD – developed a better understanding of how students learn through all of my PD. (ILMT 3, online survey, Q9, 10)

Category C appears to represent an increase in complexity of how professional learning in mathematics is experienced, in the sense that the experience of professional learning in mathematics represented by this category also includes the experience of gathering resources (Category A) and networking with other teachers (Category B). This

inclusive, or expanding, experience is illustrated in the following phrase:

[In the 2009-2010 school year, I would like the opportunity for] more in-school time to collaboratively plan [*illustrating Category B*] units in math [*illustrating Category A*]; more in-service days which give us great ideas . . . [and] help for moving IEP'd, level 1-2 kids beyond in math [*illustrating Category C*]. (ILMT 7, onsite professional learning survey, Q3)

In summary, for teachers with this view of mathematics professional learning, growth in their own understanding of the teaching and learning of mathematics is also central to their experience. In mathematics professional learning sessions, they may seek opportunities to challenge their current ways of thinking about the teaching and learning of mathematics and to develop new understandings.

### 4.4 Category D – The Enacter

For *the enacter*, professional learning in mathematics is seen as a source of catalysts for change in classroom practice. Reflecting on tasks or lessons implemented in the classroom, discussing students' strategies and solutions to problems, and identifying ways in which teaching practice has grown characterize the experience described in this category. The following phrase illustrates the way of understanding professional learning in mathematics represented by Category D.

[I] changed my entire program – my program is now problem solving based. . . . [I] really enjoyed the opportunity to grow . . . Can't imagine what my classroom would look like now without it. (ILMT 3, online survey, Q9, 10, 11)

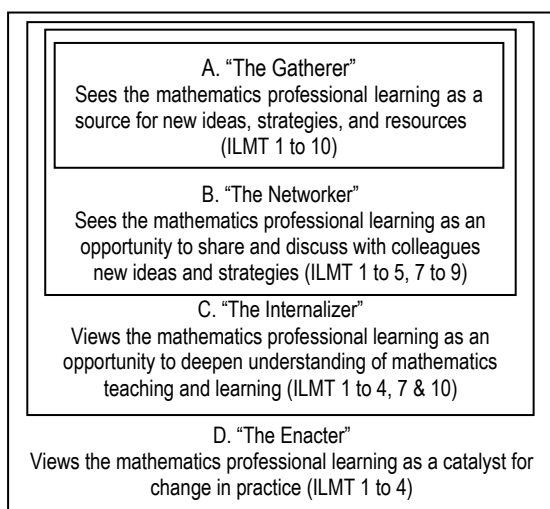
The increasing complexity of how professional learning in mathematics is experienced that we saw in the first three categories continues with this fourth and final category. Teachers who demonstrated this conception not only experienced professional learning in mathematics as a catalyst for change, but they also experienced it as an opportunity to deepen their own understanding of the teaching and learning of mathematics (Category C), as a support network (Category B), and as a source for resources (Category A). This greater complexity and inclusivity is illustrated in the following phrase:

The more I learn, the more I realize I don't know, the more I would like to learn [*illustrating Category C*]. I really like to be able to share ideas with colleagues [*illustrating Category B*] and get new ideas [*illustrating Category A*]. Problem solving is now an integral part of my math teaching – I couldn't go back to "teaching from a textbook" or "drill and kill" [*illustrating Category D*]. (ILMT 2, online survey, Q9)

In summary, teachers who conceive of mathematics professional learning in this way strive to enact what they have learned about improving the teaching and learning of mathematics in their classrooms.

#### 4.5. Distribution of conceptions of professional learning in mathematics

Teachers in the study experienced professional learning in mathematics in different ways. As has been argued above, the four ways of experiencing professional learning in mathematics that emerged in this study constitute an inclusive hierarchy, with D as the most comprehensive. The Figure 1 represents this relationship.



**Figure 1. A Category map of experiences of professional learning in mathematics**

Figure 1 also shows the distribution of these four different ways of experiencing professional learning in mathematics among the 10 participants. This distribution reinforces the increasing inclusivity and complexity of the four different ways of experiencing professional learning in mathematics. Teachers who view professional learning in mathematics as a catalyst for change (Category D) also see professional learning as opportunities for gathering new ideas and resources (Category A), networking and sharing with colleagues (Category B), and deepening their own understanding about the teaching and learning of mathematics (Category C). Similarly, one teacher whose responses revealed conception C, but not conception D, also demonstrated conceptions A and B, thus reinforcing the inclusivity and expanding awareness of the categories.

The reverse did not apply, however. Two teachers whose survey responses evinced conceptions A and B showed no evidence of the other two conceptions,

and one teacher who held conception A demonstrated none of the other three conceptions, further reinforcing one-way inclusivity of increasing complexity from Category A through Category D.

## 5. Discussion

This study found four different ways in which ILMTs experienced professional learning in mathematics. From a phenomenographic perspective, these different conceptions of professional learning in mathematics are seen as representing different breadths of awareness of the phenomenon of professional learning [7]. Thus, as the categories within the outcome space ascend, teachers have a broader awareness of the various aspects of, or ways of experiencing, professional learning in mathematics. For at least one teacher in the study, the way of viewing professional learning is as a source for teaching resources, such as teaching strategies, unit and lesson plans, professional books, or classroom manipulatives (Category A).

For three other teachers in the study, professional learning is seen as an opportunity to participate in a support network of colleagues with whom they can share ideas and strategies (Category B), as well as a source for teaching resources.

Both of these ways of experiencing professional learning in mathematics share a focus on the tools and strategies used in the teaching of mathematics.

A third way of viewing the professional learning that emerged in the study focuses on deepening one's own understanding of the teaching and learning of mathematics and involves challenging one's current beliefs and practices (Category C). Teachers in the study with this conception of professional learning in mathematics reflect on what they do in the classroom and why, placing a greater emphasis on the role of the teacher in improving student learning.

Finally, the fourth way of understanding professional learning in mathematics expands from the third and includes enacting one's learning in the classroom (Category D). Seeing professional learning in this way - as a catalyst for change - emphasizes even more a focus on the impact of the teacher's actions on student learning.

The two general emphases evident in the categories - one on teaching tools and strategies and the second on the impact of teachers' actions on student learning - appear to be related to what other researchers have found regarding conceptions of mathematics and conceptions of teaching [2, 5, 7]. It may be that teachers in the present study who demonstrated conceptions of professional learning in mathematics focused on teaching tools and strategies (Categories A and B) hold views of mathematics that align with the *procedural-formalist paradigm* [2]

Indeed, since teachers with a procedural-formalist view see mathematics as a set of facts, skills, and procedures [2], we might infer that these teachers would be interested in gaining, through professional learning opportunities, tools and strategies that would provide an efficient means for students to learn these facts, skills, and procedures.

On the other hand, teachers who demonstrated conceptions of professional learning in mathematics as opportunities to deepen their understanding of mathematics teaching and learning (Category C) or as a catalyst for change in practice (Category D) may have conceptions of mathematics more aligned with a *cognitive-cultural paradigm*, where mathematics is seen as a set of logically organized and interconnected concepts that are understood through human interaction [2]. These teachers might be interested not only in strategies and tools for helping students understand and make connections among mathematical facts and procedures, but also in the ways in which their actions and interactions with students impact students' understanding.

Teachers' conceptions about teaching in general may also influence their conceptions of professional learning in mathematics. Akerlind [7] found that teachers have varying conceptions of teaching that range from a teacher-focused conception to a student-focused conception. Looking at the present study findings, we may infer similar differences in conceptions about teaching from teachers' conceptions about professional learning. For example, teachers demonstrating Category A or B seem to hold a teacher-centered conception of teaching. In contrast, teachers demonstrating Category C or D for their conceptions of professional learning seem to have conceptions of teaching as student-centered.

If a relationship exists between teachers' conceptions of professional learning and their conceptions of teaching, we might use that relationship to draw some conclusions about how teachers' professional learning is enacted in the classroom. Teachers with a view of professional learning as either a source for resources or an opportunity to share and discuss strategies with other teachers (Category A or B) are likely to focus on their own actions as they strive to implement the ideas and lessons they received during the professional learning opportunities. Alternately, teachers with a student-centered conception of teaching and professional learning – that is, those whose conceptions of professional learning included Category C or D – are likely to focus on how their actions impact student learning. The latter group may be more willing to try different approaches and to adapt their teaching to the learning needs of the students.

This has important implications for PD in mathematics. If a student-centered conception of teaching is more likely to result in higher quality student learning outcomes [7], then PD providers need to find ways to encourage the development of more sophisticated conceptions of both teaching and professional learning in mathematics.

## 6. Conclusion

The present study revealed four qualitatively different ways in which a group of intermediate lead math teachers experienced professional learning in mathematics: (a) as a source for resources, (b) as an opportunity to network with other teachers, (c) as an opportunity to deepen one's own understanding of the teaching and learning of mathematics, and (d) as a catalyst for change in classroom practice.

A discussion of these findings in light of related research revealed that teachers' conceptions of professional learning in mathematics may reflect their conceptions of teaching, specifically teacher-centered and student-centered conceptions of teaching, and that these conceptions may influence the ways in which teachers' professional learning experiences are enacted in the classroom.

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# ICT Use for Teaching and Learning among Primary School Teachers in Rural Areas of Nigeria: A Mixed Method Study

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## Abstract

*The paper investigates the present ICT facilities exists and among primary school teachers in rural areas of Nigeria, factors that affect the use of ICT and perceptions of their skills in ICT. In addition, factors for determining ICT attitudes and factors affecting the usage of ICT in teaching were also described. Mixed method research was applied; data was collected via a questionnaire survey of school teachers in rural areas of Nigeria, and followed by semi-structured interviews. The data from questionnaire was analyzed using descriptive and inferential statistics and later triangulated with the interviews. The findings showed that some primary schools have ICT facilities and school teachers have access to some ICT in their various schools except e-mail and Internet because the majority of the primary schools in rural areas are not connected. Technical support is lacking in the schools. However, school teachers reported that lack of expertise and skills in using ICT were the prominent factors hindering teachers' willingness and confidence in using ICT for their teaching and learning. Furthermore, the results show that there was a relationship between demographic factors of school teachers and use of ICT as being very useful in teaching and learning.*

## 1. Introduction

Today, the advent of information and computing technology (ICT) are playing significant roles in education. According to Peter, as reported in Association for Teacher Education in Europe (ATEE) information technology has brought new ways of handling information, especially data carrying information [1]. The new ways of information processing are connected with new thinking methods and new problem solving approaches. Therefore, literacy in information technology is needed for teachers [2].

As we move into the era of technological advancement and information explosion, a massive amount of information is available for use. In this situation, school teachers in all disciplines need certain background knowledge and skills in seeking information to incorporate the ideas and techniques of information processing into their teaching and learning. School teachers need to know how to retrieve, evaluate and utilize information derived from various sources. School teachers need to use ICT into a process of learning that also involves the search for information for construction of new knowledge.

This era of ICT development have come with an overload of information which made school libraries to serve as a learning laboratory where teachers and students interact directly with information resources and develop research skills for teaching and learning. The present era is the era of

information, knowledge and technological revolution. Many electronic resources are available in the library. The increase of information available in electronic formats and the Internet has affected the teaching and learning of the school teachers in rural areas of Nigeria.

Researches to have shown that rural areas of Nigeria are not only suffering from lack infrastructures and information technologies that are absent but even health care facilities, educational facilities and library and information services are all things of the past in the rural areas. Nigeria is a predominantly rural country. She further, explains that precise up-to-date information on rural population size and growth patterns is not available; it is believed. However, that more than 60 percent of Nigerians live in rural areas [3]. These disproportionately large percentages of rural dwellers have many adverse implications for Nigeria's national development.

At the moment, observations have shown that almost all the studies conducted on uses of ICTs by school teachers especially with regard to the teaching and learning were carried out in developed countries where the use of ICTs has come of age, and where there are the financial capability to implement and maintained such facilities. However, the use of ICTs by school teachers in Nigeria is just beginning to gain popularity and researches in the area have just started emerging [4]. In general, it could be said that, the use of ICTs by school teachers in rural areas to teach the students is highly advantageous. This is because its enable them to demonstrate understanding of the opportunities and implications of the uses for learning and teaching in the curriculum context; plan, implement, and manage learning and teaching in open and flexible learning environment [5]. In the light of these therefore, there is the need for more research in this area to further develop the use ICTs by primary school teachers in rural areas of Nigeria and the developing countries in particular.

## 2. Studies on School Teachers Uses of ICTs

In a study by Jennings, teachers of younger age were found to be associated with more positive attitudes towards ICT [6]. This is in agreement with the report by the U.S. National Center for Education Statistics (2000) which indicated that younger teachers score higher on their perception of ICT, and have translated their positive perception into higher degree of ICT use in education. Thus, it was hypothesized that teachers of younger age make more use of ICT in schools, compared to the elderly counterparts. On the other hand, Preston et al. stated that users exhibit greater competence computer when they made frequent use



of it [7]. Hence, it was predicted that teachers who make daily use of ICTs are more competent in ICTs compared to those with a lower rate of adoption. Further, Bradley revealed that lack of technical support as a key factor inhibiting the use of ICT in classroom [8]. He has also pointed out recurring faults, and the expectation of faults occurring during teaching sessions, reduced the teachers' confidence and caused teachers to avoid using technology.

Moreover, studies in both developed and developing countries on the school teacher use of ICTs have identified staff development as one of the contributing factors in using ICT effectively in the classroom. Bradley provided a report on an investigation into effective staff development in ICT for teachers. A sample of Scottish primary school teachers have been surveyed to investigate the impact of different models of staff development in ICT on the teacher and to explore the knowledge and skills gained by teachers from staff development: technical; academic/content-related; pedagogy. The results indicate the need for a much greater emphasis to be placed on the pedagogy of ICT. This should be of interest to all involved in teacher education and the continuing professional development of teachers.

Mc Carney in a study conducted in Scotland on teachers' ICT skills and knowledge need reported that the use of ICT is relatively low and is focused on a fairly narrow range of ICT [9]. Word processing is the predominant use made of ICT in primary and secondary schools. There is some use of externally produced educational software in both sectors and secondary teachers tend to use a broader range of generic packages such as spreadsheets and DTP than do primary teachers. There is very little use of the Internet and WWW or e-mail by either primary or secondary teachers, despite the fact that the majority of secondary schools have access to the Internet. Resources such as video conferencing and network computer conferencing are rarely used. The study further revealed that primary teachers use ICT primarily to support classroom practice; secondary teachers use it as much or more for professional development and personal use as in the classroom. Teachers are using ICT throughout the curriculum but use and attitude varies in secondary schools between subject areas. Mathematics and science teachers use ICT relatively little while, amongst non-computing teachers, ICT is used most by teachers of business and management subjects.

In another review, Moseley et al. as cited by Mcfarlane, in a study of primary school teachers known to be achieving either average or above average [11]. Teachers' pedagogical approaches are in turn affected by a number of key factors. First, they are affected by knowledge about their own subject. There is a clear distinction between teachers who choose ICT resources to fit within a particular topic and those who choose resources merely to present pupils' work in a new way, without any direct application to the topic. The evidence shows that when teachers use their knowledge both the subject and also how students understand the subject with their use of ICT have more direct effect on students' attainment.

Having review relevant literature on this study, the focus still remain to examine the school teachers use of ICT in rural areas from a population of Nigeria primary school.

### 3. Research Methodology

A mixed research methodology was conducted to collect both quantitative and qualitative data on ICT use of school

teachers' in rural areas of Nigeria. The instrument used was a self-administered questionnaire consists of the demographic information of the respondents, followed by types of ICT facilities in primary schools' and the extent and frequency of ICT use in the primary school of Nigeria. Other part of the questionnaire examines their perceptions on ICTs, the next section focus on the obstacles faced, and the last section on their training and support needs. The questionnaires were randomly distributed to 1100 primary schools teachers in rural areas. In addition, 60 school teachers were used for the interview with open-ended questions to add their inputs. A total of 724 completed questionnaires were received and data were analysed using SPSS version 15.

## 4. Results

### 4.1. Information and Communication Technology Facilities used

To establish an understanding and impact of ICT use in teaching and learning in Nigerian primary education, respondents were asked to state the type of ICT facilities that exist and to what extent are they being utilised for their teaching and learning.

**4.1.1. ICT Facilities in the Primary Schools.** Out of the 724 respondents, only 252 (34.8%) indicated that they had ICT facilities in their school. Based on this response rate, less than half (44.8%) of the respondents had computers in their school. 45 (17.9%) of the school teachers had Internet, and 13.9% had audiovisuals/media. The least popular ICT facilities in the primary schools of Nigeria were CD-ROM (2.4%) and databases (5.2%). This result indicated that stills primary schools in rural areas of Nigeria are still lagging behind as less than half of the respondents indicated that they had ICT facilities in their schools.

**4.1.2. ICT used by the School Teachers in General.** In response to the ICT used, respondents were asked to indicate the type of ICT they use either in the school or in other places. Less than half (43.2%) of the respondents were using audiovisuals/media (i.e. Radio, TV etc.), 42.5% were using Telecommunication (GSM and telephone etc.) and 34.5% used computers. Moreover, about (25.0%) used the internet. However, the least ICT facility used were CD-ROM (2.9%) and databases (3.3%). The result indicates that respondents have access to ICTs except that they do not have access to the Internet and its facilities this may be because majority of the primary schools in rural areas of Nigeria are not connected.

**4.1.3. ICT used for Teaching and Learning.** Out of 724 respondents, 442 (61.0%) had indicated their responses with regards to the use of ICT for teaching and learning. Based on this response rate, less than half (33.0%) of the respondents had used the ICT once or more a day, 31.5% used ICT once or more a week. However, only (2.0%) had not used ICTs to search for information. This indicates that school teachers have access and use ICT I in their various schools only that variation exist in the frequency to which they use the ICT. This is contrary to the findings of [10] which revealed that secondary school teachers at Scotland made use of ICT as much or more for professional development and communication as in the classroom. Thus, mechanisms need to be put in place to ensure that teachers utilize computer

technology for further development and communication, such as seeking peer-to-peer advice or participating in online professional development.

**4.1.4. School Teachers Experiences with ICT use.** Of the 724 respondents, 415 (57.3%) had shows their experiences with regards to ICT use. Out of this number, almost half (48.9%) of the respondents had experience with the use of ICT for less than one year. Less than half (29.2%) had experience between 2-3 years, (11.6%) had 4-6 years experience using ICT. However, the least years of experience indicated by the respondents were 10 years and above (5.0%). It could be said that majority (78.1%) of the school teachers had three years or less experience with the ICTs. It appeared that school teachers in rural areas had no much experience with ICT use; this is the result of late comer application technology into education in Nigeria. However, observations shows that Nigerian government is making a giant stride through the educational trust fund (ETF) to inject computers and internet facilities into the primary schools in rural areas.

**4.1.5. Hours spent Using ICT by School Teachers.** Out of 724 respondents, 392 (54.1%) had indicated the number of hours spent using ICT. Based on this response rate, almost half (49.5%) of the respondents spent between 2-3 hours a week, less than half (23.5%) spent less than one hour a week, (10.2%) spent 4-6 hours a week using ICT. In spite of this, the least hours spent using the ICT was 10 hours and above. It could be said that majority (73%) of the school teachers spent three hours or less a week using ICT. This indicates that school teachers use the ICT, only that variation exists in the frequency to which they use them. This is contrary to the findings of Cuckle et al., which revealed that secondary school teachers at Scotland made use of ICT as much or more for the classroom activities [12]. Thus, mechanisms need to be put in place to ensure that school teachers in rural areas of Nigeria utilize ICT teaching and leaning and other professional development.

**4.1.6. Internet Use by School Teachers.** Out of the 724 respondents, 632 (87.3%) had responded to questions pertaining to Internet use. Majority (62.7%) of the respondents had not used the Internet, while 237 (37.3%) had used the Internet. It might appear that school teachers do not make use of the Internet that there is no technical support and Internet access are lacking. This may be due to non existence of the Internet connectivity in the rural areas and non availability of ICT technician. In addition, they consider the applications of the Internet to be specialized and require advanced skills for usage. This suggests that school teachers need training in a wider range of ICT applications for them to make full use of technology in teaching. Programmes like power point for example, allow teachers to show experiments that would not otherwise be possible, and have great educational potential to enhance teaching [13].

**4.1.7. Types of Search Engines Used.** Based on the respondents 236 who had used the Internet, less than half (45.3%) of the respondents had used Google, 84 (36.4%) had used Yahoo. However, the least search engines used by the school teachers was Dogpile, (2.1%) and others (2.5%). This indicates that No school teacher indicate having using Ask.com, Altavista and Inforseek. This shows that respondents need more awareness on the varieties of search

engines and the training on their utilisation so that they can have different alternative of finding information they need.

**4.1.8. Types of Websites Used.** Based on the number of respondents who used the Internet, 84 (34.7%) of the respondents used websites of Journal in education, teaching and learning, 61(25.8%) had used websites of teaching and learning activities, and 50 (21.2%) had used the websites of educational institutions. However, the least type of website used by the school teachers was website of book publishers (2.1%) and others (1.3%). This indicates that respondents need more awareness on the varieties of educational and pupils' websites and the training on their utilisation so that they can have different alternative of finding information they need with regards to teaching and learning.

**4.1.9. Types of Internet Search Strategy Used.** Less than half (40.3%) of the respondents had used basic search strategy to find information, 26.3% had used subject headings, 22.5% had use prelisted subject domain/menu. Only 6 (2.5%) advanced search. This shows that school teachers lack basic skills on the search strategy to be use in finding information relevant to their need. As such they need more training and orientation programmes for using different search strategy.

**4.1.10. ICT Competency.** For school teachers' ICT competency, respondents were asked to rate their perceived competency in basic computer applications which include word processing, spreadsheets, presentation tools, e-mailing, internet browsing, statistical tools and teaching courseware. Each item was measured on a five point rating scale from 1 (fair) to 5 (excellent). Majority indicated that they considered themselves to be more competent, either excellent or good in the use of word processing (56%), teaching courseware (21%), presentation tools (22%)The results suggest that teachers' computer competency is possibly related to their frequent use of word processing, presentation tools and courseware in preparing teaching materials and presenting lessons. The result is in agreement with those of Slaouti et al. and Ya'acob et al., who found teachers to be most competent in word processing compared to other applications [14], [15].

On the other hand, a lower proportion of respondents perceived themselves to be broadly good in internet browsing (17%), emailing (21%) and spreadsheets (19%). Most of the rating fell between the range of "fair" and "good", i.e. moderate level of skills in these applications. It is however, not surprising for school teachers in rural to feel less competent as these applications are most likely not used in daily teaching and instruction. Overall, the results are consistent with the findings of Novak, who concluded that ICT most commonly used by teachers was word-processing, Power Point and the WWW [16]. According to their research, "Video conferencing and synchronous communications had again not been used, email had only been used by four of the group and most had made no use of databases or text reconstruction software. It might be that these are technical areas that need to be learned by school teachers in rural areas of Nigeria, and that current training courses do not address teachers' training need in this area.

**4.1.11. Reasons for not using the Internet.** In general, respondents were asked to indicate their reasons for not using the Internet. Out of 724, less than half 224 (31.0%) of the respondents said that they don't know how to use the Internet, 29.6% had shown that they don't have it at their

working places, (21.7%) indicated that it was expensive to use. However, the least reason indicated by school teachers was that they had no need to obtain information from the Internet (1.7%).

**4.1.12. General problems Hindering ICT Use.** On the most prominent factor hindering school teacher's using ICT is lack technical knowhow and show how coupled with expertise. This is indicated by (33.8%). In addition, lack of knowledge on how to use and role play by ICT in the teaching and learning at the primary school level (25.8%). The result also reveals that (21.5%) indicated insufficient infrastructure and ICT facilities as the factor hindering the readiness of using ICT.

**4.1.13. School Teachers' Perception of ICT Adoption in Primary Schools.** School teachers broadly agree that use of ICTs makes them more effective in their teaching (50%). They more organized in their work (24%) and better in meeting their varying needs of students (38%). In addition, school teachers agreed that with the use of internet and technology, their lesson plans are richer (25%). This is in agreement with the findings of Zhao and Frank, which reported that ICT can motivate students in their learning by bringing variety into the lessons, and at the same time, sustaining teachers' own interest in teaching" [17]. In more general term, school teachers indicated that they would like to integrate more computer applications into their teaching and learning. It appears that school teachers' perceptions toward ICTs are encouraging, where most of them showed positive perceptions on computer use in teaching and learning. It is believed that teachers can see the value of the ICTs in enhancing teaching and learning, and they are positive towards further integration of technologies into classroom teaching and practice.

**4.1.14. ICT Training Programme and Support Needs.** From the above findings, most of the school teachers considered themselves as having limited knowledge to make full use of ICTs, or to integrate ICTs fully into teaching and learning. When asked to indicate the important channels for improving their ICT skills, respondents had given higher ratings to the need of school-based professional development (52%) and ICT seminars/conferences (48%). The result suggests that school leaders should initiate industry-teachers partnerships to deliver ICT training programmes that are appropriate to school teachers' needs. Other than training organized by the government, more effective ICT training could be obtained locally through NGO's and institutions of higher learning. As Becker has suggested, training should be offered to teachers on a continuous, rather than a one-off, basis so that their IT knowledge is upgraded over time [18].

## **4.2. Relationship between Personal Factors and (ICT) Use by school teachers**

To establish the factors that influenced the use of ICT among primary school teachers in rural areas of Nigeria. Chi-Test was conducted to find out whether demographic factors of the respondents were related to their ICT use.

**4.2.1. Relationship between Respondents Age and ICT Use.** Monte Carlo test was conducted to find out whether there was a relationship between respondents age and ICT use. The result of the test indicated that there was a statistically significant relationship between the variables at

0.05 level of significance, ( $X^2= 27.335$ ,  $p= .006$ , Cramer's  $V= .150$ ). Thus, there was a weak relationship between the variables, suggesting that respondents between the ages of 17-36 used ICT than their complements. When analysed according to age group, result indicated that elderly respondents (aged over 45 years and above) did not use ICT, the main reason could be, they have phobia to ICT because they are new to them coupled with the fact that they are old. This also suggests that younger school teachers feel comfortable with ICT and see its value in education, and have tried to enrich their lesson and make teaching lively. The result is not in agreement with Becker, who found that younger beginning teachers struggling to survive and settle into their new role as teachers do not emphasize the usage of computer as they view computers as 'extra', and not as a tool to enhance teaching [18].

**4.2.2. Relationship between Respondents Gender and ICT Use.** Chi-square test was conducted to determine whether there was a relationship between respondents' gender and ICT use. The result showed that there was a statistically significant relationship between the variables ( $X^2= 13.927$ ,  $p .008$ , Cramer's  $V= .180$ ). However, the relationship was weak, suggesting that male respondents used ICT more than their female counterparts.

**4.2.3. Relationship between Level of Education and ICT Use.** Chi-square result showed that there was statistically significant relationship between level of education and ICT use ( $X^2=41.831$ ,  $p=004$ , Cramer's  $V=.189$ ). In essence, there was a weak relationship between the variables. It could be said that respondents with high level of education i.e. National Certificate of Education (NCE) and above used ICT more than their complements. When teachers were grouped according to the high level of education, a higher degree of correlation,  $r = 0.64$  was observed for those having the highest degree in teaching and learning those with lower certificates [19].

## **4.3. Relationship between professional/role related factors and the use of ICT**

Monte Carlo test was used to establish whether there was a relationship between professional and role related factors (i.e. respondents practice, position, and years of experience) of the respondents and their ICT use.

**4.3.1. Relationship between Respondents Practice and ICT Use.** Respondents practice in teaching and learning and ICT use was tested using Monte Carlo test. The results showed that there was statistically significant relationship between the variables ( $X^2= 109.630$ ,  $p= 000$ , Cramer's  $V= .260$ ). Thus, indicating that there was a relationship between the variables, suggesting that respondents whose practiced was teaching used ICT more than their counterparts.

**4.3.2. Relationship between Respondents Position and ICT Use.** Monte Carlo test result generated showed that there was statistically significant relationship between the respondents position and ICT use ( $X^2= 42.932$ ,  $p= 004$  Cramer's  $V= .164$ ). Thus, indicating that a relationship between the variables suggesting that respondents whose position was ordinary teachers used ICT to seek for information more than their counterparts

#### **4.3.3. Relationship between Years of Experience and ICT**

**Use.** Monte Carlo test result showed that there was a statistically significant relationship between years of experience and ICT use of the respondents ( $X^2=105.362$ ,  $p=.000$ , Cramer's  $V=.255$ ). Thus, the relationship was weak. It could be said that respondents with 15 years or less in service used ICT more than their complements.

#### **4.4. Relationship between psychological factors and the use of ICT**

Monte Carlo test was used to establish whether there was a relationship between psychological factors (i.e. respondent's attitude and awareness) of the respondents and their ICT use.

##### **4.4.1. Relationship between Attitudes and ICT Use.**

Monte Carlo test was applied to find out whether there was a relationship between respondents attitudes and ICT use. The result of the test showed that there was no statistically significant relationship between the variables. Thus indicating that attitude of respondents had no influence with regards their ICT use.

##### **4.4.2. Relationship between level Awareness and ICT**

**Use.** Relationship between respondents' level of awareness and ICT use was investigated. The result indicated that there was a statistically significant relationship between the variables ( $X^2=107.475$ ,  $p=000$ , Cramer's  $V=.360$ ). Thus, there was a relationship between the variables, suggesting that respondents who had high level of awareness use ICT more than their complement with low awareness. In a nutshell, psychological factors have influence on the use of ICT of school teachers. This is in agreement with previous studies which found teachers' attitude toward computers as a key factor in predicting the frequency of technology use [19].

#### **4.5. Relationship between environmental factors and the use of ICT**

Monte Carlo test was used to establish whether there was a relationship between environmental factors (i.e. respondents' culture, language, and location of the respondents and their ICT use.

**4.5.1. Relationship between Culture and ICT Use.** The relationship between respondents' culture and the level of ICT use was investigated using Monte Carlo test. The results showed that there was a statistically significant relationship between the variables, ( $X^2=57.186$ ,  $p=.000$ , Cramer's  $V=.214$ ). Thus, indicating that there was a relationship between the variables. It could be said that school teachers in this study acknowledged importance of ICT for teaching and learning. This reflects the influence of their cultural norms on their use of ICT.

##### **4.5.2. Relationship between Language and ICT Use.**

Monte Carlo test was applied to examine whether there was a relationship between language and ICT use. The result showed that there was a statistically significant relationship between the variables ( $X^2=59.244$ ,  $p=.000$ , Cramer's  $V=.215$ ). Thus, there was a relationship between variables, suggesting that language had a significant influence on the ICT use of the school teachers, i.e. respondents who had

better understanding of language will the ICT more than their counterparts.

##### **4.5.3. Relationship between Location and ICT Use.**

Monte Carlo test was use to find out the relationship between location and the ICT use. The result of the test indicated that there was a statistically significant relationship between the variables ( $X^2=66.737$ ,  $p=000$ , Cramer's  $V=.233$ ). In essence, there was a relationship between the variables. It could be said that location had influence on ICT use, signifying that the closer the location the more the use of ICT by the school teachers.

## **5. Qualitative Findings**

### **5.1. ICT and Internet Use**

Questions were raised as to whether the school teachers in rural areas have access to and use the Internet for information search and use. Most of the respondents showed their desires to the use internet but access becomes most deterring factor. However, majority (50%) believed that access to the Internet would have some positive influence in their teaching and learning. Twelve (20%) of respondents demonstrated computer was the major type of ICTs they have access to in their schools., also shows that 7 school teachers (11.67%) indicate they have access to computer and other audiovisuals equipment outside the school environments and 6 school teachers (10%) Internet was used by them, but did not rank it as highly as other sources in the study.

The result indicates that respondents have access to ICTs except that they do not have much access to the Internet this may be because their schools are not connected. Furthermore, respondent lamented that the most prominent factor hindering them from having the redress and confidence in using ICT is lack of expertise, lack of access as result of availability and in adequate number of ICTs facilities. In addition, lack of knowledge on how to evaluate the use and role play by ICT as tool for information provision as well as for the teaching and learning at the primary school level.

On the issue of access and utilization to ICT and Internet in various primary schools, the result generally shows that beside other identified ICT; it's only the Internet facilities that respondents have less access. This result may be due to the fact that these facilities are not available for access or perhaps the teachers lack the skills to access them. Moreover, the Nigerian government considers providing Internet connectivity in primary schools as welcome development even though, the process is moving at a very snail speed coupled with the government seeing the Internet connection as being expensive and difficult to maintain. However, it is pertinent to note that providing the Internet connectivity should not be seen in this way considering the plethora of information that can be accessed by the school teachers and how this could be of immense help to facilitate teaching and learning.

School Teachers who responded to this survey have also given some valuable insights on how ICT usage in schools could be improved. Among others teachers demand for internet access, local area networks, wireless Internet to be made available in schools to allow them to explore information besides books and courseware; They also expressed the need to have a ICT network for teachers to

facilitate sharing of materials, to post important announcement and communication among their colleagues. In general, factors like lack of time and technical support, limited knowledge to integrate ICT fully in teaching were identified as the key factors affecting uptake of ICTs in primary schools of Nigeria. Primary School level professional development and ICT conferences were perceived by the teachers as important channels for improving their ICT skills.

## 6. Discussions of Findings

The findings showed that school teachers in rural areas of Nigeria have access to and use ICT in teaching and learning. The result generally showed that beside of other identified ICTs, it's only the Internet and e-mail facilities that respondents didn't have access to. This is in agreement with the report by Gordon University Aberdeen, Scotland that teachers reported less use of the Internet and e-mail. This result may be due to the fact these facilities are not available for use or perhaps the teachers lack the skills to use them. Moreover, Nigerian government considers providing Internet connectivity in primary schools even though it was found to be expensive and difficult to maintain. However, providing Internet connectivity should not be seen in this way considering the advantages school teachers would benefit and how this could be of immense help to facilitate knowledge delivery in teaching and learning. With regards to frequency of use, the result generally shown that a considerable number of teachers use ICT at least 3 hours a week. This is an indication that using ICT by the Nigeria primary school teachers is becoming higher as compared with other studies before. This confirms the report by The Robert Gordon University Aberdeen and Tella A., that teachers came out positively with regards to the use of ICTs [10], [20]. It also confirms the assertion that availability usually determines access. If the ICTs are available, this will motivate school teachers to access them than when they are not available or available but not in sufficient quantity and quality.

Additionally, more demographic factors were found to have significant relationship with ICT use, thus, improving the quality of teaching and learning. All these may be responsible for the relatively high use of ICT by Nigeria school teachers. The study also shows that ICT technical support and Internet facility are lacking in all the respondents schools. The report by Tella A. that teachers were reasonably confident in their use of ICT but felt that they needed much more in the way of support and professional development to maximise their use of ICT in the classroom support the present findings [20]. The lack of ICT technical support therefore may be attributed to the government ineptitude for not providing adequate ICT facilities, couple with the fact that integration of ICT in the school curriculum in Nigeria is a new paradigm. Studies have shown that majority of Nigerians begin to develop interest in the area and take it as chosen field of study. It could be said that with the government commitment and people desire to use ICT in their activities in a sooner time more expert and ICT technician will begin to emerge.

The study found that few public primary schools had ICT facilities. Though there was a positive intervention by Nigerian government through Educational Trust Fund (ETF). ETF had allocated computers, internet facilities, library facilities to some primary schools as physically seen

and observed by the researcher. More importantly, the findings with regard to ICT use provide a big challenge to school teachers in rural areas of Nigeria. If quality in primary education is to be attained, a more radical and positive approach to the provision of ICT facilities in primary schools in rural areas of Nigeria must be adopted. Presently, even those primary schools where ICT facilities are available, there is still a limitation in terms of access. In most instances, access to the Internet by school teachers is still largely minimal. In addition the findings showed that there were incompetence in using most of the ICT and electronic resources due to unfamiliarity. ICT facilities in primary schools of Nigeria in general are inadequate. This implies that if school teachers do not acquire proper information seeking skills from their universities and colleges of education, the chances are that they might not learn them on their own.

All in all, there is still a serious problem of inadequacy of ICT facilities in primary schools of Nigeria, especially in the least developed state and where such facilities exist; they are not proportionally distributed. It could be said that ICT are still in their developmental stage, as most of the school teachers have no experience in the use of ICT. Moreover, it appeared that those respondents who have experience of using ICT have a better opportunity to seek more information from the different format comparatively and more frequently than those without such experience.

## 7. Conclusion

This study investigated school teachers' ICT use in rural areas of Nigeria, it appears that most of school teachers have positive attitude with the use of ICT, and they appreciate the use of ICT in enhancing teaching and learning. The use of ICT is increasing, and it is now possible to deliver teaching and learning to a widely disperse audience by means of technology. The study also showed that there is an increasing awareness regarding the potentials of ICTs in teaching and learning. Many public primary schools in rural areas of Nigeria are infusing ICT into their teaching and learning activities. Training therefore, should be offered to school teachers on a continuous, rather than a one-off, basis so that their IT knowledge is upgraded over time. It is indeed hoped that the benefits from the use of ICTs can be fully realized and optimized in teaching and learning. From the findings is worthy of mention to say that ICT will have positive implications in teaching and learning at the primary schools in rural areas of Nigeria. In the light of this, there a greater need for further development and use among school teachers particularly at this level, therefore, it is recommended that, government, NGO's, Institutions and Community take a bold step to become a stake holders in providing ICT into the primary schools in rural areas of Nigeria. They should take advantage of providing in-service and on the job training on ICT to school teachers. In addition, workshops, seminars and conferences should also be encourage and organized.

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# Evaluation of the Training and Development Agency for Schools' Funding for ICT in ITT Projects: A Research Summary

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## Abstract

*This paper outlines the findings of the evaluation of the TDA's programme for funding ICT in Initial Teacher Training (ITT). It will outline the main impacts of the programme on trainers, trainees, schools and learners of this major ICT intervention project. Further it will demonstrate a viable model for the implementation of ICT in any organisation and as such is of value to the system as a whole. This paper reports on 216 ITT providers and some 13,222 trainees who had direct involvement in, or were beneficiaries of, these projects. Overall, 1,515 schools were said to have been involved in projects. This paper is informed by video case studies of six ITT providers and two previous reports: an analysis of ITT providers' application and evaluation documentation from the programme between 2005 and 2008; and a detailed analysis of a survey of ITT providers.*

## 1. Introduction

The whole project was backgrounded by impact frameworks Kirkpatrick [1], Shulman and Shulman [2], Guskey [3]. ITT providers were asked to assess trainees' and organisations' use of a technology before and after the TDA-funded projects. Their assessments were analysed using a five point e-maturity scale derived from Hooper and Reiber [4]. In this model, the five stages of ICT use were identified as: familiarisation; utilisation; integration; reorientation; and evolution.

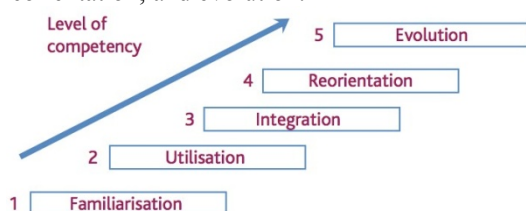


Figure 1. E maturity scale Hooper and Rieber

The overall shift for trainees and organisations brought about by the projects was from utilisation (stage 2) to integration (stage 3). This meant that they had moved from a point at which they had some experience of using the specific ICT to one where

they had integrated it into their practice and it had enhanced teaching and learning.

At the beginning of the projects, 17% of respondents felt that their organisations were at a stage even before 'familiarisation' (stage 1), that is they were unaware of the potential benefits to practice of the ICT project in question before it began.

After the projects 90% of trainees were thought to have moved into one of the higher three categories – integration, reorientation or evolution.

The most dramatic shifts in use by both trainees and organisations were associated with projects that focused on laptops in particular, and on interactive whiteboards (IWBs). These shifts were more common in school-centred initial teacher training providers (SCITTs) than other types of providers. Although this appears to contrast with research that has found that IWBs have had limited and variable impact on classroom practice and pupil learning (see, for example, Moss et al, [5]; Somekh et al [6], it should be emphasised that respondents were asked to report on a range of impacts, including attitudinal changes, and that improved use of IWBs may reflect emergent and/or latent expertise in that area that has developed since the earlier evaluations were conducted.

The fact that overall trainees involved in projects progressed more in their ICT use than ITT organisations did as a whole was indicative of the issues involved in taking such projects to scale across an organisation.

## 2. Impacts on trainers, trainees and their organizations

### 2.1. Impacts on trainees' knowledge and practice

The survey asked providers to assess the impact TDA-funded projects had on trainees and trainers in a number of areas.

Impact on trainees varied considerably and depended on a range of factors, notably the culture of placement schools and trainees' prior familiarisation with a technology.

As might be expected, positive responses about impact clustered around trainees' increased awareness of the ICT funded by TDA (where 91% responded positively) and confidence in using it (where 97% responded positively).

Overall impact on trainees appeared to be less strong in employment-based initial teacher training providers (EBITTs) than in other forms of ITT provider, particularly in relation to trainees having the opportunity to experience new models of teaching using the technology. This contrasted with the degree of overall organisational impact where smaller providers, such as EBITTs, were more likely to report dramatic shifts in ICT use.

An ITT provider's capacity for change as an organisation was more important than its relative size overall in determining the impact funded projects had at different levels.

Projects involving large numbers of staff consistently reported higher levels of impact on trainees.

## 2.2. Impacts on trainers' knowledge and practice

Projects had to focus on raising trainers' awareness of ICT before developing their confidence in using it.

There were widespread variations in the impact projects had on trainers. Certain technologies, such as the use of video and other multimedia approaches, appear to have generated greater initial take-up by tutors, trainers and mentors. Similar impact was brought about through ICT-led enhancements to existing administration and support systems used by staff.

Variations in impact were accounted for in terms of trainers' willingness (or resistance) to change. In comparison, variations in take-up and use among trainees were more likely to be associated with differences in their prior engagement with a technology or contextual factors in their placement schools. Projects involving large numbers of staff were more likely to report higher levels of impact on trainers.

## 2.3. Impact on schools and pupils

The survey also asked providers to indicate where TDA-funded projects had an impact on schools and pupils.

There was limited evidence of widespread impact upon pupils and schools, with 23% of providers stating they did not involve schools. Although there were some highly effective practices, many of the projects' aims in this area of impact remained aspirational. However, there was only limited evidence of trainees being able to act as significant

change agents in schools. Approaches that appeared effective drew on pupils' digital habits and supported their desire to voice their views and create their own content.

School contexts and cultures in relation to ICT were more frequently described as moderating factors than as enablers with regard to supporting ICT innovation. They were more likely to be associated with inhibiting the transfer of practice than with supporting trainees to innovate.

Schools' willingness to accommodate new approaches was a key factor in terms of impact. Where trainees were able to share new ideas and approaches with peers and school colleagues, they appeared to be able not only to develop their own practice but also to change schools' views of ICT.

## 3. How were these impacts achieved?

### 3.1. An implementation model for ICT in ITT

We identified three generic groups of factors whose interaction determined the success of any implementation. These were: the status of the technology being introduced; the ITT organisation's capacity for innovation; and the degree of alignment between the innovation and the needs and concerns of individuals and teams in the organisation.

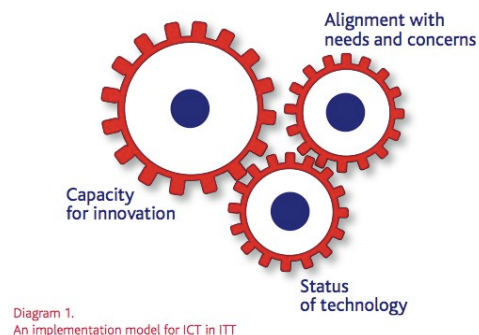


Figure 2. An implementation model for ICT

### 3.2. The status of the technology being introduced

Rather than restricting our observations to the technical status of the technology being introduced, we also considered the role played by the social and learning status of a technology. Successful innovations were characterised by the following:

- movement from consideration of the technical status of the technology in isolation towards recognition of the role played by its social and learning status
- selection of a technology which had a high social status.



- challenging negative perceptions of a specific technology
- recognition of how differences in prior engagement with a technology or with functionally similar social software affect initial take-up and overall training and support needs
- utilisation of those with in-depth understanding of the learning potential of technologies to model to others.

Technologies that had a high social status with trainees were those they felt contributed to their emerging professional identities, such as laptops and IWBs

### **3.3. Building and focusing the capacity for innovation**

Capacity was examined at three levels - individual, team and organisational. Successful innovations were characterised by the following:

- recognition of individuals' existing understanding of the technology and encouragement for them to use this to support others
- sequential and focused support for a limited number of individuals who then mentored others
- integration of opportunities to model different uses of the technologies throughout existing provision and across the different contexts in which trainees operate
- encouraging teams to experiment and take risks
- building an ethos of openness and shared learning
- developing structures and process to support sharing between project participants
- providing discipline through enquiry and evaluation
- offering leadership support at all levels and creating additional leadership capacity.

### **3.4. Aligning the needs and concerns of individuals and teams**

This group of factors appeared to have the greatest influence on whether an implementation was successful or not. The technology being implemented and how it was designed to be used had to meet a significant number of individuals' needs and add substantively to the quality of the core activities of key groups and teams. Specifically it was those factors which were key to the mobilisation of individuals and teams that appeared most important. Successful innovations were characterised by the following:

- they had to meet a range of individuals' specific needs
- in the context in which they were operating, they had to meet these needs more easily, or at less cost, than other existing or potential approaches

- they needed to add substantively to the quality of the core activities of key teams of trainers and groups of trainees
- they had to have a degree of congruence with the overall strategic aims of the ITT organisation
- they were underpinned by core educational values.

### **3.5. Going beyond numbers to deep and lasting change**

The TDA funded projects have had a considerable impact upon ITT providers of all forms across the system, with some 216 different providers successfully applying for TDA funding from this programme over its last three years. To address the question of how likely it was that the vast range of projects that have been funded will cumulatively lead to a profound impact upon ITT providers and their trainees, Coburn's (2003)[7] model for scaling up educational initiatives was adopted. This model highlights that for projects to become sustainable sources of change they need to have achieved a broad scope of implementation; a certain depth of change; and to have transferred the ownership of the project from its initial

## **4. Scope of implementation**

The analysis of both project documentation and the questionnaire survey indicated that in one year of funding (2006-07) providers reported some 13,222 trainees being directly involved in, or benefitting from, these projects. 56% of projects involved fewer than 100 trainees while 13% involved more than 500. Overall, 1,515 schools were said to have been directly involved in projects in that year. Analysis of providers raised two significant issues with regard to scope of involvement:

- higher education institutions' (HEIs') larger size meant that they faced greater challenges than smaller ITT providers in engaging a critical mass of trainers, and particularly senior staff, within the time span of a single project. This problem was in part ameliorated by larger providers' ability to adopt more strategic and long-term approaches to developing ICT use
- HEI providers benefitted from having trainees who were involved in training over more extended periods of time than was the case for EBITTS and SCITTs. This allowed for the development of a critical mass over the longer term and for support to be offered by more experienced trainees.

### **4.1. Depth of engagement**

If scope is concerned with the numbers of people involved in a project, depth focuses on the extent to which they became engaged. Again, there are two

issues of particular relevance to the development of deeper engagement:

- the first of these is the variation between trainers and trainees in the take-up and application to practice of various technologies. A great deal of the variation in take-up can be accounted for by the fact that trainers and mentors were less likely to change or adapt their pedagogy in order to accommodate or make best use of 'new' technologies. Trainees who had not developed a 'habitual pedagogy' were more likely both to engage with 'new' technologies and to change their pedagogies to incorporate their use.
- the second issue that particularly affected the depth of engagement of trainees was the consistency with which they encountered others using the technology and with which they encountered supportive individuals and contexts. Trainees experienced widespread variations in practice and ethos both across training providers and within schools. A key issue in terms of trainees having an impact on schools and pupils was that ITT providers found it difficult to engineer widespread coordination of ICT developments with schools. This meant many trainees were unable to develop their practice within placement schools.

#### **4.2. Transfer of ownership**

The final strand in achieving sustainable change is to progress from a situation where an innovation is perceived as a project which is 'done' by some people 'to others' to a way of working in which it is widely owned in an organisation. Project leaders were more successful in transferring ownership when they used technology which had a high social status, where trainees saw its use as a key part of becoming a 'teacher' rather than an imposition. Certain technologies, such as laptops and IWBs, have already reached the status of being professionally ubiquitous in that their absence in a professional context is more likely to be noticed than their presence. For pupils, high social status was associated with technologies that linked out of school learning with learning in school and which provided them with different opportunities to express their views and learning. One of the key factors in moving ICT development away from being a series of projects to an evolving and more integrated way of working was, in a number of instances, the development of a virtual learning environment (VLE) which could be used by trainees and mentors dispersed across schools. VLEs not only became a crunch point between those developing ICT for teacher trainees and those responsible for overall ICT strategy for their institution, but also provided an alternative ICT infrastructure that supported and enhanced other developments.

## **5. Future directions for funding**

### **5.1. Sustaining funding**

Although many of the funded projects have had sustained impacts, there are questions about how sustainable this level of funding is and which types of organisations and projects should receive funding. As part of the survey ITT providers were asked how they felt funding should be administered, and their responses can be summarised as follows:

- In support of choice and localised solutions (Small is good): Respondents were reluctant to give up funding that could easily be matched with local priorities and might be regarded as an entitlement. They were largely not in favour of an 'open competitive process', fewer but bigger projects, and restrictions on technological choices. This suggests that the recipients of funding liked the degree of control and choice afforded them by the TDA ICT in ITT programme.
- Proving their impact and worth as part of the process of project evaluation (Show and tell): Respondents recognised that projects needed to be more focused and disciplined in the future, reflecting a desire to prove their worth and effectiveness: 36% and 53% respectively definitely or possibly agreed that all projects should have impact evaluation built into the project design process. However, they were unsure as to how best to evaluate impact and were keen to be supported in this area.
- Communication and dissemination (Connected is better): Respondents came out in favour of increased collaboration between projects and of ring-fencing a percentage of funding for the communication of project outcomes. They were keen to see the use of mechanisms such as project dissemination events and collaborative wikis that would expand and enhance existing professional networking opportunities.
- Long rather than short term (Focusing on sustainability): Respondents were in favour of projects being allowed to continue from year to year, provided that further funding was subject to evidence of impact and that future targets were established within the first phase of a project. The cost of more robust and in-depth monitoring and reporting would be balanced by the benefits derived from establishing longer term, strategic aims for ICT development.

## **6. Implications and recommendations**

### **6.1. Implications and recommendations for ITT providers - institutional lag**

In specific projects trainees were seen to be developing their use of ICT at a much faster rate than in the organisation as a whole. This particularly

affected providers that only had trainees for short periods of time and found it more difficult to harness their capacity to innovate. There are a number of recommendations related to knowledge transfer and achieving sustained change:

- specific teams of trainers should be involved in innovations so that sufficient individual and team capacity is built up during the project
- trainees' innovative practice should be captured before they complete their study, for example through contributing to a VLE
- innovative trainees should present to and share practice with subsequent cohorts • trainees should be encouraged to develop 'fresh' pedagogical approaches in order to inform and renew training strategies.

Trainers are often not aware of the learning potential of key technologies or are not confident in their use. The following actions are recommended to address this:

- high leverage professional development approaches, such as mentoring and coaching, should be targeted at trainers
- emphasis should be placed on the use of certain technologies, such as video and other multimedia approaches, which appear to generate high levels of take-up and enthusiasm among trainers and trainees
- providers should audit the digital habits of both trainees and trainers to ascertain the match or fit between current skill sets and those required by any ICT implementation. This would inform professional development and alert providers to the potential quick wins available by using certain technologies.

## 6.2. Implications and recommendations for ITT providers and schools

Further implications and recommendations for providers and schools have been addressed together to reflect the necessity for interdependent and joint approaches to achieve change.

The relative lack of success of trainees in acting as change agents in schools was associated with unsupportive school cultures. There are a number of recommendations about supporting trainees and school based mentors:

- where possible, trainees should collaborate with each other on ICT projects while on placement in real or virtual teams
- school-based mentors should be supported and engaged through the wider professional development offer of ITT providers. For example, one organisation had developed a Master's module around ICT implementation
- school ICT co-ordinators should be more involved in supporting trainees
- opportunities should be created for trainees to share ideas and curriculum innovations in ICT with colleagues in school

- ICT projects should be developed jointly with schools in order that innovation can be shared and to ensure that both schools' and ITT providers' cultures are supportive of trainees.

## 6.3. Professional status and identity

Choice of technologies should be based on an understanding of which of them have high social status for trainees and reflect and support their developing professional identity. It will be vital to ensure that the technologies to which trainees are introduced at least match those which are available and in use in schools.

## 6.4. Engaging learners

Providers and schools should be aware of the digital habits and skills of their pupils. ICT interventions should build on these skills to engage pupils and motivate them to voice their views and create their own content.

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# ICT and Educational Reform in Kazakhstan

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## Abstract

*Rapid global technological and economic development brought certain challenges and opportunities to countries placing greater demands on education systems and creating the need to provide students with knowledge and skills to succeed and compete in an information-based society. How does Kazakhstan responses to this need? This paper examines national policies, strategies and initiatives for accommodating new technologies in education in Kazakhstan. The findings show that Kazakhstan has made considerable steps to keep up to the imperatives of the technological revolution through the development and integration of ICT in education and is moving towards equipping people with better information and policies that would enable them to remain competitive.*

## 1. Introduction

Information and Communication Technologies (ICT) are becoming the major driving forces of globalized and knowledge-based economies of the new world era creating a very competitive environment and posing certain challenges to educational institutions. Schools and teachers are pressured by educators, academics, consultants, administrators and policy-makers to promote higher-order thinking, creativity, authentic, real-world, student-centered learning and information literacy. ICT is seen as a key lever to achieve these goals, as a critical indicator of keeping up to the imperatives of technological revolution, and of preparing children for the future world that can not be imagined without ICT. As Pelgrum has noted ICT “is not only the backbone of the Information age, but also an important catalyst and tool for inducing educational reforms that change our students into productive knowledge workers” [2, 14].

This need to better prepare students for the information age presenting certain challenges and opportunities for the developing countries, have generated there a number of speculations about the necessity of educational reforms that will accommodate the new technology. Governments in

most developing countries have responded to the challenge by initiating national programs to introduce computers into education.

How does Kazakhstan as one of such developing countries responses to these needs? This paper aims at revealing the degree of official endorsement for the use of ICT in education in Kazakhstan through analysis of a numbers of policy documents and initiatives taken by our government within the last decade.

## 2. Kazakhstani context for ICT in education

Kazakhstan is one of the developing countries which gained its independence after the collapse of the Soviet Union in 1991. Striding towards market—based economies more closely linked with global markets, it is aware of the need to provide our students with knowledge and skills to succeed and compete in an information-based society. Within a relatively short period of its independence it achieved considerable growth in all the spheres of its life including education. Development of education is proclaimed as one of the priority directions in Kazakhstan Strategy 2030. Since gaining independence the education system has undergone a number of reforms aiming at creation of such a model of education that meets the national goals and matches international standards. Recognizing the challenge of the “information age”, and considering that ICT can play a key role in its efforts, the government in Kazakhstan is currently pursuing the technological track in education. It adopted a number of official documents and generated a number of initiatives for accommodating new technologies. These steps ascertain the degree of its official endorsement for the use of ICT in education in Kazakhstan.

## 3. National policies and strategies

One of the first documents approved by the decree of the President of RK in September 1997 was “The State Programme of IT Integration in

Secondary Education” [9]. It aimed at total computerization of secondary schools.

Another document “The Conception of IT Implementation in the System of Education in Kazakhstan for the years 2002-2004” defined main goals and objectives, ways and mechanisms of IT integration into all levels of education. One of its main directions was the development and implementation of secondary education IT management system as well as the development of republican and regional databases of electronic textbooks, educational video, testing programmes, and media centers.

In 2004 “The State Programme for the Development of Education in the Republic of Kazakhstan for the years 2005-2010” was approved by the decree of the President of Kazakhstan [11]. It promotes reform in the education system and emphasizes lifelong education and implementation of ICT in teaching and learning. Main directions of ICT implementation are outlined as following:

- Improvement of legal normative bases of ICT implementation;
- Further computerization of secondary education institutions aimed at achieving world standards of hardware provision;
- Provision of the Internet access to secondary educational institutions;
- Development and implementation of distance education technologies at all levels of education;
- Creation of educational IT centres in the regions and educational portal of the Ministry of Education and Science of RK;
- Provision of secondary education institutions with educational software in accordance with curricula;
- Integration of information system of monitoring, analyses and management of educational institutions [11, 31].

One of the most important documents under review was the Government Decree “On Establishment of the Digital Divide Decrease Programme in the Republic of Kazakhstan for Years 2007-2009” [12]. This programme is aimed at creation of conditions in Kazakhstan for overcoming an information inequality and widening the use of ICT and innovative technologies. The necessity of such a programme it stated by the following statement: “Unacceptance of digital technologies, their weak development means defeat in the world race for economic prosperity and political domination in the future information-based society. The virtual reality radically changes industry, education and life of people, creating boundless information space all over the world” [ 4, 12].

Main directions of this program include training courses for teachers in different regions of Kazakhstan, provision of access of the population to open information, increase of IT knowledge and

qualification level via Distance Education Centres. A system of measures is planned to be developed to increase motivation and interest in acquiring IT skills and use of ICT, including multilevel “National IT – certification”, 100% mandatory testing of students graduating schools and universities for “Information Science ” knowledge, integration of this discipline into the teachers’ professional development courses.

It is expected that successful realization of the Program will allow Kazakhstan to achieve the following parameters:

- Computer literacy for the population not lower than 20% which will exceed the current data by 15,7%;
- Internet users in Kazakhstan not lower than 20% of the total population which is 17,2% higher than at the present moment;
- Increase professionalism of domestic IT specialists;
- Filling in the Kazakhstani segment of the Internet with the important and educational information;
- Provision of cost accessible computer equipment and Internet access to the population [12].

Achievement of these parameters is expected to promote development of an information infrastructure of the society and preparation of Kazakhstan for transition from an industrial society to postindustrial-information-based society.

The most recent document adopted by our government is a “Strategic Plan of the Ministry of Education and Science of the Republic of Kazakhstan for the years 2009-2011” [13]. It outlines main strategic directions of education system development including ICT integration. Its first direction aiming at providing access to high quality education includes such parameters as equipping schools with multimedia labs (up to 92 % in 2011 as compared to 62% in 2006), high speed Internet access 9up to 65% as compared to 38% in 2009), increase the numbers of educational institutions using interactive equipment (up to 3318 in 2011 as compared to 1000 in 2008) and creation of educational TV starting from 2009 [4, 13].

Document analysis revealed that the policymakers in Kazakhstan consider the adoption and the use of ICT as integral to the country’s progress and modernization and thus are active in promoting educational reforms.

#### **4. Main achievements in ICT integration in education**

In accordance with the adopted policy documents significant progress has been achieved in the ICT integration into education, especially in the amount of computer technology going into our nation’s

schools. 100% of schools computerization has been completed, digital resources for school students cover 60% of school programs, though the provision of schools with them varies from 5% to 36 in different regions. 96 % of schools in Kazakhstan have access to the Internet and 3080 schools have classes with interactive equipment. The ratio of secondary school students to computers in Kazakhstan is now 21 to 1 (in 2004 it was 54 to 1) which is considered by the UNESCO data as one of the highest among countries of Commonwealth of Independent Countries. At the same time as compared with such developed countries as the UK and the USA where at the beginning of 2004 it was 5 to 1 and 4 to 1 accordingly, this ratio is still high.

Since 2007-2008 academic year online education is being implemented into education process. According to the schedule every week expert teachers conduct interactive classes for 1000 schools via “e-Learning Kazakhstan” portal [6]. Creation of this portal promoting e-learning and interactive teaching on a national level is a considerable event for our system of education. It is designed for the teachers to help them learn the possibilities for the improvement of teaching quality with the help of new information technologies. It also provides e-resources for the use by teachers, opportunities for exchange of experience with colleagues from other regions and for joint development of new information educational resources.

Another portal – “Educational Portal of Kazakhstan” [5] - was created thanks to realization of the Digital Divide Decrease Programme. Its main goal is to provide access to information resources to wide audience irrespective of their geographical location.

As realization of the programmes demand qualified teaching personnel training courses are being conducted for teachers in different regions of Kazakhstan. In 2007, 1000 teachers and 2000 students of IT-specialties were trained for the work in summer computer schools with 2000 other teachers in 2008 and 2009. In whole within the last 5 years more that 11,000 teachers were trained by the government contracted work for ICT professional development. But nevertheless this parameter continues to stay the weakest among others showing the level of ICT development and integration into education [7, 11, 12, 13].

It is noteworthy to add that the statistics shows permanent growth of the number of Internet users which in Kazakhstan. If in 2000, for example, there were 70,000 of the total population (0, 5%), in 2005 - 400 thousand (2, 7 %), then by September 2009 this number grew up to 2,300,000 or 14.9%. But nevertheless it is still low as compared with the developed countries. For comparison, in South Korea, Singapore, Japan this percentage was 67 %, in Great Britain - 63 %, Denmark - 70 %, USA and

Canada - 68 %, Russia - 16,5 % and Estonia - 50 % [5;6].

According to the World Bank data, Kazakhstan was in the 64th place among 68 countries in the “rating of e-readiness for 2005”, which was conducted by the analytical department of British journal “Economist “(2006), while Russia and Ukraine ranked 52<sup>nd</sup> and 61<sup>st</sup> accordingly. This rating measures the environment of electronic business of the country through the average weighted index consisting of about 100 quantitative and qualitative criteria, including such as an opportunity of connection to the Internet, business environment, legal, political, social and cultural environment and support of electronic services.

In accordance with Network Readiness Index rating 2008-2009, developed by the World Economic Forum, Kazakhstan ranks 73d out of 134 countries, leaving behind all other countries of CIE, including Russian Federation [15].

The statistics and data presented above show that Kazakhstan makes considerable steps to keep up to the imperatives of the technological revolution through the development and integration of ICT in education and is moving towards equipping people with better information and policies that would enable them to remain competitive.

## 5. Issues for consideration

Despite numerous IT integration policy documents and initiatives in Kazakhstan, as well as expenditures for computer and Internet accessibility, major questions remain about the actual use of computer technology in classrooms. Can it be assumed that the placement of ICT in Kazakhstani classrooms equals effective integration for teaching and learning?

Previous research shows that educational change cannot simply be attained by placing computers in schools. As a recent educational innovation, the computerization of education is a complex process where many agents play a role. Zhao remarks that is a worldwide phenomenon that computers in classrooms have not been used frequently enough to realize the claimed educational benefits of these expensive machines and that complaints of technology not being used or underused have been voiced by policymakers and the general [16]. The studies also show that the implementation of technology at schools and higher educational institutions in developing countries have been of limited success because they were not being guided by research [1]. As research shows in many cases computers were introduced into schools not as a means, but as an end. Computers were not provided with supplementary measures to enable educators to develop positive attitudes toward the new tools and

to use them. This has often resulted in an approach in which technology availability is mistaken for technology adoption and use.

Such situation seems to have been the case in most countries across the world. Research in the United States and Europe, for example, has indicated many factors that play role in effective integration of ICT into educational system and that computer technology cannot be automatically linked with effective integration of ICT for instructional purposes [2, 3, 8, 14]. Thus, despite the presence of ICT in the classroom, the extent to which such technology resulted in actual improvements in teaching and learning cannot be assumed.

My observation and teaching experience as an instructor of English Language at Kazakh -British Technical University and a president of National Association of Teachers of English in Kazakhstan has given me some insight into the state of technology integration in language teaching and learning process. Being complex and long, the process of technology implementation demands information gathering and planning as the initiation stage. In today's world it is important to get information that helps us to see what we are doing, fix problems and document achievements [4].

Technology changes quickly and unpredictably. Lacking data, faculty and administrators make big investments of time and money with their eyes closed. Most administrators in Kazakhstan assume that if faculty gets this hardware and software, they automatically and quickly change their teaching tactics and course materials to take advantage of it. No information is gathered regarding teachers' attitudes towards new technologies, their beliefs about it and interaction with different factors influencing its integration. Within this context FL teachers in Kazakhstan are left with multiple challenges generated by different agendas. They often find it difficult to address these challenges due to different factors under which they operate.

What are these challenges and factors that influence the extent to which FL teachers use computer technology in Kazakhstan? What are the barriers to successful integration of technology? How and why are teachers using computer technology? What should we do to meet new challenges and opportunities that developing technologies present?

The research on questions like these can help us avoid adopting new technologies simply because they are new, fast, or engaging for the user. It will work towards establishing a picture of the current state of computer technology integration in FL teaching practice in Kazakhstan, focusing on teachers as main agents of change and developing their positive attitudes towards the new technologies. Defining different factors influencing integration and their correlations with teachers' attitudes and beliefs

will help to meet the challenges and develop strategies for more successful and effective integration of ICT in education in Kazakhstan.

## 6. Conclusion

A number of policy documents adopted and initiatives for accommodating new technologies taken by the Kazakhstani Government that brought to a significant progress in ICT integration ascertain the degree of official endorsement for the use of ICT in education in Kazakhstan and reveal the policymakers' understanding of the ICT development and integration for the country's progress and modernization. While ICT use in education in Kazakhstan is relatively recent, it has nevertheless made an impact on education system. The findings suggest that the policy environment in Kazakhstan has come to accord large importance to ICT in schools, though there practically no credible research evidence to indicate that ICT use contributes to the improved learning outcomes. The previous research shows that educational change cannot simply be attained by placing computers at schools. So the major questions remain about actual use of ICT in classrooms which is the next step for further investigation.

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# Assessing the Self-efficacy of Science Teachers in Secondary Schools in the Free State Province of South Africa

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## Abstract

*An exploratory and descriptive survey will be used to assess the teaching efficacy of science teachers in secondary schools in the Free State province of South Africa. Cluster sampling has been used to select the schools under investigation, while stratified random sampling was used to select teachers from the selected schools. A self-constructed questionnaire, as well as the Science Teachers' Efficacy Belief Instrument (STEBI), will be used to collect data from the teachers. In addition to the demographic data, the self-constructed questionnaire will also assess the teachers' content knowledge and pedagogic skills. Such data will be measured against the two subscales of the STEBI, namely, personal science teaching efficacy and the science teaching outcome expectancy scales. Semi-structured interviews will probe further on the data obtained through the questionnaires. Both quantitative and qualitative data analysis procedures will be used. Based on the results of the study some recommendations will be made.*

## 1. Introduction

Changes in education policies and curricula bring added challenges, demands and responsibilities on the teachers who are implementers of change. Teacher training programmes have to respond to such changes by offering training programmes aimed at producing effective teachers who are able to meet the challenges of the day.

In the era of rapid technological advancements and increase in knowledge, there is a growing interest in the fields of school effectiveness and the quality of education. The prevailing multicultural education context world-wide and in South Africa, in particular, demands that teachers assume more demanding roles and responsibilities. Although teaching is a practical activity, it is not a static element that can be applied from observed classroom context to all other contexts

and situations [12]. Teaching is a complex activity that requires teachers to develop capacity to make intelligent decisions to handle ambiguous and challenging situations. Hence teacher education is charged with the responsibility of fostering such capabilities through the theoretical understanding and practical experience.

In-service teachers have to be empowered with the necessary and relevant skills to meet the challenges of the ever changing developments in education. One way towards helping them is to assess their teaching efficacy in specific subject domains. This assessment will help identify problems they encounter in teaching science and strategies will be devised to help them overcome these problems.

## 2. Related work

Teacher qualification and experience are some of the factors that relate to student performance [16]. Hence there is a need for quality teachers as they make a difference in student achievement. The major factor contributing to academic success is dependent upon trained and capable teachers.

The teacher quality is an important topic of concern for the South African education system authorities and the South African public at large in ensuring quality education. There have been many changes in the South African education system since 1994. These changes were deemed necessary because of the nature of the South African education system which was fragmented and segregated on racial and ethnic lines under the Apartheid government. There was never a co-ordinated education system, and this led to different teacher training programmes some of which were very basic in terms of content knowledge and pedagogy. While the government has been trying to redress the imbalances of the apartheid system in the field of education, and teacher education, in particular, the quality of teachers and teaching in the historically

disadvantaged communities is still an area of concern.

The National Professional Diploma in Education (NPDE) and Further Diploma in Education (FDE) for teachers were introduced to retrain teachers who were categorised as under-qualified according to the new South African qualifications framework. The aim was to bring these teachers to the acceptable REQV 13 qualification. Other qualifications such as the Advanced Certificate in Education (ACE) were introduced as a way of reskilling teachers. Changes in the educational policies, curricula and teaching methodologies have their demands and challenges which all come to bear on teachers. Changes in curricula, in particular, assume that teachers are equally trained and prepared to teach, and yet research has shown otherwise. Research has shown that preparedness of both teachers and students are related to self-efficacy. Self-efficacy has been identified as an important predictor of teacher effort and persistence [6]; instructional effectiveness and efficient classroom organization, planning and practices [3]. All these changes come to bear on the same teachers that were historically disadvantaged. These changes appear to have widened the gap between the historically advantaged and well resourced schools and the historically disadvantaged and resource-starved schools. How then do we ensure that the practising teachers are competent and confident enough to deal with the challenges of dealing with content knowledge and pedagogy/instruction as well as the demands of classroom management? Within the domain of science teaching and learning, some specific problems have been identified. These include teachers' low level of content knowledge in science subjects [5], inability to perform science experiments and other practicals [15], and inability to use technology in presenting science subjects [8]. All these factors affect the confidence of science teachers in presenting science classes and consequently, this impact negatively on the performance of learners [2], [17]. How do we help the teachers to be successful in their classrooms?

One consistent measure of teachers' future success in the classroom is their self-efficacy, or belief in their capability to do the job. This issue is of utmost importance in ensuring teacher quality since the link between a teacher's perceived self-efficacy and his or her potential effectiveness in the classroom has been established by educational research [7], [9], [21].

### **3. Statement of the Problem**

Self-efficacy beliefs are believed to predict future behaviour [10]. If a teacher believes that he or she is capable of managing his or her classroom and conducting meaningful lessons, he or she will more likely do just that. In line with this thinking, schools of education in general and teacher preparation programs in particular need to be aware of the factors associated with increased levels of self-efficacy, in order to produce the most capable, innovative, and dedicated teachers possible. The effective learning of science by learners is directly influenced by teacher confidence and competence [22]. Science is a two-way subject comprising of the theoretical and practical aspects. It is important for the teacher to master the theoretical scientific concepts before he or she can apply them practically. If the teacher is deficient or lacks confidence in these concepts, it becomes impossible to conduct the practical activities [15]. This leads to a big gap between theory and practical where learners end up looking at science as non-existent, impossible and difficult.

### **4. Research Methodology**

#### **4.1. Research design**

This study is a causal-comparative research design that is descriptive and explanatory. The purpose of descriptive research is to describe that which exists as accurately and clearly as possible [23]; and in explanatory research, qualitative data are used to elucidate, elaborate on, or explain quantitative findings [13]. The study will use both quantitative and qualitative designs of data collection, which include two questionnaires, semi-structured interviews and observations.

#### **4.2. Population and sample**

The targeted population for the study will be science teachers in secondary schools in the Free State province of South Africa. This province consists of 341 secondary schools which are situated across five districts namely: Motheo, Lejweleputswa, Fezile Dabi, Thabo Mofutsanyana and Xhariep. Cluster sampling will be used to select 100 schools to represent the different geographic locations of the schools per district. In cluster sampling, the researcher identifies convenient, naturally occurring

groups such as neighbourhoods, schools, districts and regions [13]. Its advantage is that it gives the researcher an opportunity to select the sample that best suits the purpose of research based on his/her knowledge of the population. This method also has the advantage of concentrating the field of study in a specific section of the geographical area and thus helps to save costs and time [23]. For the purpose of the study it is used to ensure that township, farm and former Model C schools are included in the study.

From the 100 schools 400 teachers will be selected using stratified random sampling to constitute the sample for the study. In stratified random sampling, the proportion of subjects randomly selected from each group is usually the same as the proportion of that group in the population [11]. Stratified sampling assures the researcher that the sample will be representative of the population in terms of certain critical factors that have been used as a basis for stratification, and also assures him/her of adequate cases for sub-group analysis. It is used in this study because the researcher can obtain data that can be generalized to a larger population within margins of error that can be determined statistically.

### **4.3. Data collection techniques**

#### **4.3.1. Research Instruments and data collection.**

The study will use two questionnaires followed up by semi-structured interviews as data gathering instruments. The first questionnaire will be a self-constructed questionnaire. Section A of this questionnaire will be designed to gather data on teachers' demographic details such as age, gender, educational background, teaching experience, geographic location of the school and the grades taught. Section B will gather data on their level of preparedness and confidence to teach physical science. This will include the teachers' understanding of subject knowledge (theory and practical work), facilitation skills and assessment. The study will determine if all the independent variables mentioned would influence the teachers' perceptions of their teaching efficacy as measured by the Science Teachers' Efficacy Belief Scale discussed in the next paragraph. This questionnaire will be piloted to ensure clarity of questions and to determine the length of the questionnaire. Comments from the participants, as well as their feedback will be used to improve the wording on this questionnaire.

The second questionnaire that will be used in this study is the Science Teachers' Efficacy Belief Scale

(STEBI-A) which was designed by Riggs and Enochs in 1990. The STEBI was tested for reliability. The two scales in the STEBI-A which is designed for in-service teachers, are entitled Personal Science Teaching Efficacy Belief (self-efficacy dimension) and Science Teaching Outcome Expectancy Scale (outcome expectancy dimension). The long version of the STEBI-A consists of 25 items, 13 positively written and 12 negatively. The co-efficient alpha of the personal Teaching Efficacy Belief is 0.92 while alpha for the Science Teaching Outcome Expectancy Scale 0.77 [21]. This is recommended for use with in-service teachers. This scale asks for a self-report of teacher beliefs and is constructed using a five-point Likert-type response scale with the options of strongly agree, agree, uncertain, disagree, and strongly disagree.

The feedback from the STEBI-A will lead to semi-structured interviews conducted with a selected number of lowest scoring and highest scoring teachers on the STEBI-A. Semi-structured interviews are a more flexible version of structured interview, which will allow for a depth of feeling to be ascertained by providing opportunities to probe and expand the interviewee's responses. It also allows for deviation from a prearranged text and to change the wording of question or the order in which they are asked [18]. To ensure that responses are captured efficiently a tape-recorder will be used to record the interviews. Depending on the outcome of the semi-structured interviews, observations can be conducted as a follow-up to the semi-structured interviews.

The ethical aspects like access and acceptance, informed consent, privacy and confidentiality, misinterpretation and misrepresenting of data will be taken into consideration as this study will be dealing with schools, focusing directly on teachers. Research comes into the lives of people who are the focus in various ways, taking their time, involving them in activities they wouldn't otherwise have been involved in, providing researchers with privileged knowledge about them- and therefore potentially, power over them [18]. A letter seeking permission to conduct the study in the secondary schools of the Free State province will be written to the provincial Free State Department of Education.

#### 4.3.2. Relationship of variables in the study.

The dependent variables in this research are teachers' self efficacy which has two scales, the Personal Science Teaching Efficacy and the Science Teaching Outcome Expectancy scales. The independent variables are the teachers' demographic factors such as age, gender, education background, teaching experience, geographic location of the school, grades taught and the level of preparedness and confidence in teaching selected science topics.

#### 4.3.3. Analysis of data

- Statistical analysis of data: Data gathered will be analysed both descriptively and inferentially using the Statistical Package for the Social Sciences (SPSS latest version available). Descriptive statistics will include frequencies, percentages, frequency distribution, means and standard deviation. Inferential statistics will involve analysis of variance (ANOVA) and Regression.
- Qualitative analysis of data: Data collected through semi-structured interviews will be analysed to draw themes and categories that will emerge from the data.

### 5. Theoretical Framework

Given the history of disparities in teacher preparation in South Africa, and the plethora of changes in the curriculum and the OBE approach, this study is necessary to assess:

- the general teaching efficacy of the science teachers in secondary schools in the Free State province;
- the impact of the demographic factors such as age, gender, educational background, teaching experience, geographical location of the school, and grade levels on science teaching efficacy, and
- the impact of the teachers' level of preparedness regarding content knowledge, facilitation skills and assessment on teaching efficacy.

Knowledge of content and pedagogy is not sufficient on its own for the effective teaching of science [22]. Knowledge of learners and their characteristics is another vital aspect of the relationship. Constructivism is a widely used term with a particular perspective on the teaching and learning of science. It is characterized by the view

that children are not without ideas about the events and phenomena in the world around them. They have formed ideas in making sense of everyday experiences, but these ideas often conflict with the scientific view. "Constructivist teaching involves finding out what students' views currently are and helping to focus construction of new knowledge towards ideas generally held in the scientific community" [22]. The role of the teacher is therefore to develop approaches to encourage conceptual change. It is therefore imperative that teachers are efficacious in teaching science, as their competence directly affects the learners' learning of science. This is emphasized by Ausubel's famous line, "The most important single factor influencing learning is what the learner already knows. Ascertain this and teach them accordingly" [1]. It is thus important to assess the level of understanding and the efficacy of teachers in order for the learners to be taught accordingly, and for meaningful learning to take place.

The Social Cognitive Theory is the overarching theoretical framework of the self-efficacy construct [4]. Through the Social Cognitive Theory, Bandura advanced a view of human functioning that accords a central role to cognitive, vicarious, self-regulatory, and self-reflective processes in human adaptation and change [19]. People are viewed as self-organising, proactive, self-reflecting and self-regulating rather than as reactive organisms shaped and shepherded by environmental forces or driven by concealed inner impulses. From this theoretical perspective, human functioning is viewed as the product of a dynamic interplay of personal, behavioural and environmental influences. Bandura calls this three-way interaction of behaviour, personal factors (in the form of cognition, affect and biological events), and environmental influences or situations the "*triadic reciprocity*." Within the classroom setting students' academic performances (behavioural factors) are influenced by how learners themselves are affected (cognitive factors) by instructional strategies (environmental factors), which in turn builds itself in a cyclical fashion [4].

All the thoughts that affect human functioning, and standing at the very core of the social cognitive theory, are self-efficacy beliefs [19].

### 6. Conclusion

The study will shed light on the teaching efficacy of science teachers in the Free State province.

Bandura argues that self-efficacy is a situational and domain specific construct whereby confidence varies depending upon the skill required or the situation faced [4]. In line with this argument, the study will make departmental officials and school principals aware of the context specific as well as subject specific problems that teachers encounter in their schools and possible solutions to the problems.

This study will focus on science teachers of secondary schools in the Free State province.

The size of the sample may make it impossible for generalisation of the results to be made to the greater Free State province.

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## **Session 12: Higher Education**

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A Particular Case in Business Degree  
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# Development of New Teaching Methodologies in the European Space of Higher Education: A Particular Case in Business Degree

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## Abstract

*The Bologna Declaration entails important changes for University Education. The establishment of a system of credits involves a more active and dynamic role to be adopted by students. Besides, it entails a new planning of subjects where the necessity of establishing a professional academic profile of the degree is placed on the definition of the competence units and the design of a module of formation are required. In this paper, we analyze the problems related to the planning process of a subject of the degree in Business at University of Coruna (Spain) in the framework of the European Space of Higher Education. The solution is given by the development of methodologies based more on learning. It supposes a more active role for students. Besides, the obtained results have been, in general, satisfactory from the point view of students and professors.*

## 1. Introduction

The Bologna Declaration (June, 1999) entails the convergence beginning of the structure in the European education systems. It seeks to promote the following objectives:

- Adoption of a system of degrees that allows to promote the competitiveness of the European system of higher education [1].
- The introduction of a system based on two main cycles [2].
- Development of the European Credit Transfer System with the aim of favouring the student mobility [3].
- Promotion of the elimination of the obstacles which do not allow for the mobility of students, professors and administrative staff [4].
- Implementation of the necessary European dimensions of the higher education space, particularly with regard to curricular contents, inter-institutional co-operation and integrated programmes of study, training, and research [5].

Besides, the European Space of Higher Education entails the establishment of a higher importance of learning. Traditionally, the emphasis of the higher

education was given to teaching. However, nowadays, active and motivating teaching methodologies are being used.

## 2. Literature review

As we have said above, we are merged in a context of reconsideration of the university functions in the society. There are many causes that motive these changes [6]:

- Survival. The flexible organizations are the only companies that can have hope in surviving and having success.
- Necessity of compatibility, comparability and competitiveness in the European higher education.
- The new technologies. With the development of these technologies, the objective of higher teaching is favouring and stimulating the rigor in the information selection, promoting the rational organization of that information and supporting their possible interpretation.

In this context, it is necessary to consider the importance of European credits which is related with the student productivity. Therefore, it is necessary to use teaching methodologies that entail a greater autonomy and academic responsibility of students [7]. There are various methods, such as academic works, study of cases, practical or tutorial classes.

These elements are basic in order to obtain the competences that the degree entails. Competences are defined as “a combination of knowledge, abilities (intellectual, manual, social,...), attitudes and values which will allow students to resolve problems adequately or their intervention in questions of a certain academic, professional or social context” [8].

## 3. Analysis of findings

We show the planning process that we have developed with the aim of adapting the subject “Economy of the Enterprise: Management and Organization” to the European Space of Higher Education. It is a four- monthly subject which is studied in the first course of the degree in Business at Coruna University (Spain). The main professional academic competence of the degree in Business Management is the introduction of the necessary

knowledge to create new executives. So, it is necessary to develop knowledge related with the decision process in the different levels of the enterprise: Finance, Accounting, and Marketing.

With regard to the specific competences, we obtain:

1. *First competence*: students should identify the relevant factors for the development of the strategy and managerial objectives.
2. *Second competence*: students should identify the most suitable organizational structure for companies taking into account their characteristics.

Later, we establish the design of the formation module which is given by the development of three phases: A) elaboration of the list of topics; B) the design of the teaching process and C) the establishment of the evaluation method.

A) *Elaboration of the list of topics.*

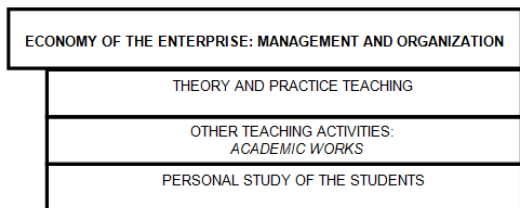
The Table 1 shows the list of topics of the analyzed subject. We can observe that topics are divided in two types which coincide with the name of the subject: management and organization. The analysis of the management topics allows to obtain the first competence. Likewise, the study of the organization topics allows to reach the second competence, established above.

**Table 1. List of topics of “Economy of Enterprises: Management and Organization”**

ECONOMY OF THE ENTERPRISE: MANAGEMENT AND ORGANIZATION	
	TOPIC
I. MANAGEMENT	1. Economic analysis of the enterprise. 2. Industrial analysis versus resources and capacities theory. 3. Business strategy 4. Management objectives
II. ORGANIZATION	5. Introduction of organizational analysis. 6. Parameters of organizational design. 7. Contingency factors. 8. Organizational models

B) *The design of the teaching process.*

The teaching process is developed by means of the consecution of the activities which are shown in Figure 1.



**Figure 1. Application of the European Space of Higher Education to the subject “Economy of the Enterprise: Management and Organization”**

Now, we establish a detailed description of these activities:

1. Theoretical and practical teaching. Master classes have the following characteristics:

- Clear presentation of the problem that will be analyzed and of the theories and available technical instruments for its study.
- Development of the capacity of critical analysis by means of an interdisciplinary approach.
- Establishment of the empirical information sources.
- Reflection of the practical applicability about the studied topics.
- Development of participative and dynamic classes.

Besides, the master class, it is also important to introduce practical classes. At the end of every topic, students will have to resolve a practical case of a real enterprise where they will have to apply knowledge acquired in the master class.

2. Besides, *other teaching activities* will be performed. In this context, students have to conclude academic work during the course in groups of three people. They have to follow the next phases:

- Analysis of a strategic/organizational problem with theory and practical relevance which will be chosen from economic press.
- Students will choose the theory approach and the available bibliographic sources.
- Students will choose the most methodology to be applied.
- Drawing-up of the work.
- Presentation of the work in class.

3. *Personal study of the student*. In the framework of the European Space of Higher Education, some theory hours will be replaced with tutorials. In those hours, professors will supervise the academic works and students could resolve questions related with the development of them.

C) *The establishment of the evaluation method.*

Finally, the application of this new teaching model will mean changes in the evaluation method as well (see Table 2). The final grade of the subject will be given by the exam and the teaching spaces derived from the European credits. Therefore, students have to participate in the European teaching space to pass the subject. So, it is necessary for students to adopt a more dynamic role.



**Table 2. Breakdown of the final grade in the subject “Economy of the enterprise: Management and Organization”**

Concept	Maximum points	Minimum required points
Attendance at class	1 point	1,5 points for both concepts
Academic work	3 points	
Examination	6 points	2,5 points

#### 4. Contribution to knowledge

The application of the new teaching methodology based on learning has supposed some advantages and problems from the view point of the students and professors.

Students indicate the following positive aspects:

- The acquisition of competences related with the development of communicative skills, the learning by themselves and the necessity of adopting a more active role because they will have to use it in the enterprise.
- The execution of practice cases based on real enterprises related with the topic analyzed in class.
- The guide of the professor in the use of books and other references to conclude the academic works.
- The supervision of the academic work with tutorials.

With respect to the weak points of the new teaching method, students establish:

- The difficulties to manage the different implication levels of the group members that make the academic work.
- The fear of expressing themselves unsuitably in the work presentation.
- A student group does not like the new teaching methodology based on learning because they prefer a more passive role.

Professors obtain as positive aspects:

- The advantage of having more information to shape the final grade of the subject.
- The new teaching methodology entails a closer relation professor-student and the consequent positive aspects -higher trust, a friendly atmosphere in class.

In relation with the weak points of the new teaching method, professors establish:

- Higher work levels which are not occasional but constant.
- Difficulties to know if work is achieved by the group or if it is result of an individual task distribution between the group members.

#### 5. Conclusions

In this paper, we have summarized our pedagogical experience in the planning and application of new teaching methodologies in the subject “Economy of the enterprise: management and organization”. This subject belongs to the degree of Business, first course, at University of Coruna (Spain).

The objectives and competences are obtained by means of the application of a new teaching model where there is a more dynamic participation of students. So, they have to draw up an academic work in groups and analyze practical cases based on real enterprises.

These activities have allowed students to acquire, besides the topics learning, abilities such as interdependence, responsibility, ability of information searching and oral communication.

The obtained results have been, in general, very satisfactory because academic works presented by students have been thorough and presentations have been enriching. Besides, students have positively considered the analysis of real enterprises and the academic work.

#### 6. Future work

In future work, we are going to analyze, in a more detailed way, the impact of the introduction of these new teaching methodologies on student performance. The selected methodological procedure is based on the development of a survey which will be made by our students.

Later, a statistical study of the information provided by the survey will be made (descriptive, correlation and regression analysis) and it will be compared with the observed performance. It will allow us to establish the more relevant concepts with the aim of improving them.

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# Developing a Community of Enquiry Approach to Learning in Higher Education

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## Abstract

*This paper disseminates on-going development work in applying a community of enquiry approach as a tool for learning with undergraduate Education Studies students. The work aims to empower students as learners through the development of creative thinking and enquiry skills and at the same time to encourage them to have a different view of learning. This different view sees learning not simply as a passive process of absorption of knowledge passed on from teacher to student, but as an active enquiry-based process of exploring and sharing thinking and ideas with peers. Furthermore, by encouraging the students to facilitate the community of enquiry process for themselves, it is argued that the learning benefits could be even more powerful.*

## 1. Introduction

The key idea is to develop a community of enquiry pedagogy in the classroom. The inspiration for this approach to learning came from attending training in Philosophy for Children (P4C) provided by The Society for Advancing Philosophical Enquiry and Reflection in Education (SAPERE). By translating these principles and approach into the higher education context the aim was to encourage the development of creative thinking and promote greater student engagement with the learning. There are examples of the SAPERE Community of Philosophical Enquiry model being used with adult groups. For example, Philosophy in Pubs (PIPs) is used as a means of exploring:

Ideas, beliefs and values using a critical and creative thinking method, in order to gain clarity and refinement of thought. In turn, this approach can lead to a refinement in our motivation, in our being and daily living. [10].

The idea for the Community of Enquiry approach was also influenced by the work of Heron on co-operative inquiry [6]. Co-operative inquiry is a form of participative research but an important feature of co-operative inquiry is the priority given to working with others as full co-inquirers:

Co-operative inquiry is a form of participative, person-centred inquiry which does research *with* people not *on* them or *about* them [6].

In applying this approach to the classroom, the development work described in this paper drew on some of these ideas. The aim was to foster active and shared learning through enquiry in the classroom. In fact this work is on-going and a community of enquiry methodology is currently being trialled as a tool to engage undergraduate students in systematic thinking, questioning and finding out together in the classroom. Thus it is becoming a form of research through discussion between co-operative inquirers, each as participant informants within the inquiry group. It appears to have the potential for a powerful tool for promoting learner engagement: ... as a group they interweave creative discussion with concerted action and openness to experience [6].

The Community of Enquiry method may be likened to Heron's 'supported action inquiry' which, he suggests, can be transferred to different situations such as a tutor supporting student autonomy in learning.

## 2. Literature Review

According to Fisher [3], the term 'Community of Enquiry' appears to be attributed to Peirce, a philosopher from the nineteenth century. Fisher suggests that: A community of enquiry can be said to have been achieved when any group of people act co-operatively in the search for understanding.

A community of enquiry in the classroom is a democratic approach to learning which allows students the freedom to co-construct ideas and knowledge through dialogue. These underpinning concepts of freedom, democracy, dialogue and creative thought are reminiscent of the ideas of Dewey who, as Garrison & Neiman remind us, saw these as a means to unlock human potential [5].

SAPERE defines a Community of Enquiry as: A group of people used to thinking together with a view to increasing their understanding and appreciation of the world around them and of each other [13].

As previously explained, the framework of an enquiry used with the undergraduate students in this study is influenced by Heron's approach [6] and also by the P4C approach described by SAPERE. The latter is structured in the following way:

Preparation: Seating is arranged in a circle, the community agree ground rules for the conduct of the enquiry so that it is respectful, caring and collaborative. A warm-up or 'ice-breaker' activity may be used first:

- Presentation: The facilitator introduces a stimulus to prompt thinking and questions. Examples of stimuli used with the undergraduate Education Studies students included photographs, paintings, a journal article or other reading;
- Thinking Time: This is a time built in for quiet reflection on the stimulus. These reflections can be recorded in some way if students desire;
- Conversation: Students may share their reflections if they wish, e.g. with a partner or in a small group;
- Formulating the questions: Questions prompted by the stimulus are collected and written up on a flipchart;
- Airing the questions: The author(s) of the questions may briefly explain the thinking behind their own question. Questions which are similar or which link to a concept or idea can be grouped together;
- Selection: Through a voting process the choice of question for the enquiry is made;
- First words: The group whose question is chosen is invited to open the enquiry by sharing their initial thoughts and ideas;
- Building: All students are now invited to contribute to the discussion. The facilitator should only contribute to aid the process and if necessary to remind students to listen to others, be respectful and consider other people's points of view;
- Final words: At the end of the enquiry, the facilitator will invite the students to reflect on the enquiry before then allowing each the opportunity to share their final thoughts.

Heron sets out how an inquiry group can be started by calling for other inquirers to join the initiators [6]. In a sense, in this study the initiation of the inquiry comes at the moment from the module tutor who provides the stimulus and also links the enquiry to the module topics to be studied. However, the aim is that as this process is developed over time, students will feel empowered to initiate their own enquiry groups into these topics both as part of the classroom sessions and also in their own self-study time.

The Community of Enquiry can be seen as a model of social learning and certain key things seem to be at its heart – social interaction, relationships and dialogue. According to Jordan et al:

There is much interest in communities of learners and communities of practice where learning is acquired through social group interactions and participation [8]

Drawing on the work of Gabriel and Montecinos, (2001) Jordan et al take the view that 'deeper meaning-

making' can be achieved when peers learn together in groups than individuals achieve alone [8]. Relationships between group members appear to be crucially important if peer learning groups are to work effectively as a site for sharing and creating knowledge. The community embodies a social constructivist perspective on learning as described by Jordan et al, where knowledge is said to be constructed in the context of the environment in which it is encountered and where shared meanings and understandings are negotiated through discussion [8]

Brookfield and Preskill examine the learning opportunities available through the use of democratic discussion and see discussion and democracy as inseparable: Democracy and discussion imply a process of giving and taking, speaking and listening, describing and witnessing all of which help expand horizons and foster mutual understanding [1].

They also remind us that discussion is a valuable learning tool because it can be a fulfilling and enjoyable experience. However, for it to be so we must acknowledge the importance of the learning community operating according to inclusive principles to encourage this enjoyment and participation. Brookfield and Preskill remind us that there are certain necessary skills and requirements – attentiveness and careful listening for example – for a purposeful in-depth discussion [1]. These seem to be important pre-requisites if an enquiry is to work well as a deep learning experience.

There is therefore a number of factors which appear important in fostering a Community of Enquiry approach to learning. One of these is the need to establish an atmosphere in the classroom which is conducive to this method of learning. Students need to feel that their questions will be considered seriously and that all ideas will be afforded earnest, sincere and respectful consideration by peers. A Community of Enquiry approach is nurtured over a period of time, as relationships develop and group members gain experience of learning together. A further consideration is the introduction of students to the role of facilitators of an enquiry. This is probably best introduced after being first modelled by the tutor and also after some accompanying training is given in the development of facilitation skills. Drawing on their own experience, Brookfield and Preskill draw attention to the role of the teacher in modelling these skills to a high level: When the two of us lead discussions, we strain to hear and to understand, fully and correctly, what is being said. We often ask follow-up questions to make sure that we understand a comment and to affirm that all our attention and our energy are focused on what each student is expressing [1].

### 3. Findings and Analysis

This paper reports an initial ‘reconnaissance’ stage for an action research investigation involving a classroom intervention which has been implemented, observed and reflected upon. It is planned to continue to build on the findings from this reconnaissance stage of investigation through further action cycles in order to develop and refine the practice in future. Denscombe suggests that one characteristic of action research is its practical nature, often concerning itself with issues in practice settings [2]. The research reported here has a very practical focus on developing knowledge in order to improve practice in student learning and, according to McNiff et al in action research it is the action that drives the research [9]. However, with a clear focus on knowledge creation through this research, it is very much concerned with praxis:

Praxis is informed, committed action that gives rise to knowledge from and about educational practice.

The Community of Enquiry approach reported on in this paper is being introduced initially as part of the learning strategy on two undergraduate Education Studies modules here at York St John University. One is a level one module entitled ‘History of English Education’ and the other is a level two module entitled ‘Knowledge and the Curriculum’. On the History of English Education module, the enquiry process began with a stimulus taking the form of a number of historical schoolroom paintings including T.E. Duverger’s painting ‘In the School Room’, Eric Mohn’s ‘School Girls’, ‘Surprise’ by Norman Rockwell, Jacob Taanmann’s ‘When Teacher’s Back is Turned’ as well as some photographs of school classrooms in Victorian times. By the nature of this module it lends itself to the use of artwork, film, artefacts and archive material, all of which have potential for use as stimuli for enquiries. The students taking this module also visited a Victorian school classroom at a local museum in order to re-enact learning from that time in this setting. There is ample opportunity therefore to identify a stimulus for an enquiry with a focus on helping students to achieve the aims and learning outcomes for this module.

The stimulus for the first enquiry was provided by the paintings and photographs of schooling in past times, as mentioned above. The students spent some time in small groups observing and discussing the paintings in detail, noticing the expressions on the faces of the children and teachers, the arrangement of furniture, the resources, wall displays, formality and uniformity. A ‘freeze-frame’ technique proved a useful device in helping students to interrogate the paintings. This was done by students fixing the painting or photograph in the centre of a large piece of flipchart paper, drawing lines outwards from the people and

objects depicted and writing the questions which these had prompted in their minds onto the flipchart paper. For example, working in this way with a photograph of a lesson in a Victorian schoolroom prompted the following questions and issues to be identified as a result of the ‘freeze-frame’ activity:

- Is learning just copying out?
- Why are they all working on their own? No group work and no discussion.
- All their drawings are the same. No creativity. No imagination.
- The children are sitting still. No activities or group exercises.
- It is a serious atmosphere - strict teacher and rules and control. Children all concentrating.
- The teacher is not at their (the children’s) level. She may make them feel overpowered.
- What are they doing there?

This process in itself proved to be a very effective device for creating student engagement and fostering curiosity and it mapped onto the enquiry stages of presentation, thinking time, conversation and formulating the questions. Other artefacts might have been used for this activity such as for example a Victorian school timetable, a school logbook or an HMI school inspector’s report from the Victorian era.

These questions identified by the students then prompted a wider discussion to do with the kind of assumptions about learning which may have underpinned the organisation of classrooms in the settings depicted in the images. At this point a further stimulus was introduced in the form of a summary of the ideas of Senge on ‘Industrial-age assumptions about learning’ [12]. The ideas generated through discussion of Senge’s ideas prompted reflections from the students on the models of learning and classroom organisation they had experienced themselves when at school. The following are examples of questions raised and aired which show how the students were engaging in speculation, reflection and reasoning:

Do ‘industrial-age’ ideas about learning still influence schools today?

Is learning really just about receiving knowledge or is it about developing the person?

Some children will always push the boundaries of school rules. So what is the best approach to discipline? Was it better then or now?

Turning now to the level two module ‘Knowledge and the Curriculum’, a reading on different perspectives on current debates about the curriculum provided the stimulus designed to promote critical thinking. Having read this before the class, students came to the session ready with their imaginative enquiry questions such as:

Does it matter how we order the curriculum if it’s the end result that counts?

What would happen if schools took charge of the curriculum?

Would a different curriculum model cut down truancy?

Haven't we been here before? What has changed?

Here students showed themselves capable of framing relevant and challenging questions. These provoking and fascinating questions proved 'attention-grabbing' and appealing not only because of their nature but also and importantly, because they had originated from the students themselves. Students were invited to explain the thinking behind their questions before the class then formed into a number of enquiry groups, each choosing from the above questions the one they wanted to pursue for their enquiry. A number of enquiries then proceeded simultaneously after a briefing had been given to those students volunteering to act as facilitators in each group. The enquiry groups fed back later to the class in a 'final words' plenary session, which gathered together the learning points and invited reflections on these.

In a subsequent group interview with the facilitators, their reflections on the enquiry process and their perspectives on this way of learning were invited. They reported that this approach had made the experience of learning more fun and motivating. They also argued for further clarity of purpose. They felt that this could be achieved by the tutor making the intended aims and benefits of this method of learning more explicit to the class before beginning the enquiry. This was something they felt would help peers to 'see the point' of such an approach, by identifying more clearly the opportunities it affords them to develop useful transferable thinking and learning skills. They felt that this would then increase the motivation of peers to engage more actively with the task. Further useful feedback points were offered by the facilitators and these will be taken forward to inform the development of this work. These included: the further development of student facilitation skills; the number of students in each enquiry group for the group to work well, and finally, the need to achieve further clarity at times about the ideas underpinning the questions when these are aired.

#### **4. Contribution to Knowledge**

Fisher highlighted two aspects to the community of enquiry approach which are that it provides both a rational and a moral structure [3]. According to Fisher, the former promotes the development of effective thinking and shared ideas and the latter mutual respect and the development of democratic shared values. These rational and moral purposes can be seen in these examples drawn from classroom practice with higher education students. The practices described have a

moral purpose in that they seek to develop active engagement through dialogue with other students in a democratic, respectful and co-operative community of enquiry. The practices also have a rational purpose in seeking to develop the intellect through thinking and reasoning skills, providing planned opportunities for reflection and deep learning. Fisher has suggested:

We need both critical and creative thinking, both analysis and synthesis, both the parts and the whole to be effective in our thinking [4].

Through the Community of Enquiry method, students have been observed using their imaginations, speculating, reasoning, and thinking logically. In other words, they have been employing the processes which are generally associated with both creative and critical thinking. The importance of developing creativity and creative thinking in higher education has been recognised for example by Jackson et al in the Imaginative Curriculum project [7]. In describing the Imaginative Curriculum project Jackson appears to connect creativity to moral purpose and to intellectual purpose and we can link this to our previous discussion of Fisher and the two aspects of the community of enquiry approach – rational and moral structure. Jackson describes this thus: Driven by the moral purpose of making a difference to students' lives by enriching their experiences and helping them develop their creative talents, as well as their intellectual abilities, the mission of the Imaginative Curriculum project is to promote conversations about creativity and encourage teachers, institutional and disciplinary communities and leaders, to think more deeply about its place in higher education.

What is becoming apparent from applying the Community of Enquiry approach in these sorts of ways is that it appears to be a powerful means of unlocking passion and imagination as two potent forces for learning. Students have become impassioned as they have experienced the freedom to identify their topic for discussion and they appear to connect quite personally with this during the discussion circle. The Community of Enquiry approach has provided a structure and bound together students as co-learners in ways which seem to have added potency to the learning. We learn from PIPs that: the key features of philosophical enquiry can be captured by 6 words all-starting with the letter 'C' and should be seen as having an overlapping interplay rather than standing alone in isolation from each other. They are aimed towards habits that are Caring, Co-operative, Collaborative, Critical and Creative (of thought through reason and reflection) and seek to gain a shared Comprehension [10].

This Community of Enquiry strategy has therefore contributed to the development of our knowledge and understanding of pedagogical practices which bring

together the rational and moral purposes in learning. In the Community of Enquiry learning is a co-constructed social process which operates well when students first agree and adhere to group protocols and then collaborate and share their learning together. Through the rational purposes the strategy has helped to develop important learning skills and techniques appropriate for undergraduates. Our knowledge of how these purposes can be powerfully combined through the Community of Enquiry to encourage student engagement has increased through this study.

## 5. Conclusions

The development of a Community of Enquiry approach to learning is in its infancy but is considered worth continuing with and perhaps eventually it may be embedded within pedagogic practice. There appear so far to be at least two reasons why it is considered worth sustaining and developing further.

Firstly, the potential of this Community of Enquiry pedagogy as a means to support student engagement has been encouraging. It is thought that the high levels of engagement might be attributed in part to the way it has harnessed the curiosity of the students to want to find out and also in part to the active role they have had in generating their own questions. A further factor in encouraging engagement appears to have been the stimulation they have experienced when working as co-inquirers with peers.

Secondly, through this planned process of working together with peers as members of a community of enquiry, students have practiced some important skills such as hypothesising, reasoning, offering extended explanations, questioning and reflecting. The enquiry group has also offered opportunities for students to pursue a logical line of enquiry and to develop, sustain and defend an argument and as such has contributed to the learning of some important skills and techniques. The UK Quality Assurance Agency for Higher Education Framework for Higher Education Qualifications has amongst the qualifications descriptors for a higher education qualification at level six, Bachelor's degree with honours, the skills and techniques of analysis, enquiry, problem-solving and an ability to devise and sustain arguments [11]. The community of enquiry is a strategy which contributes to the development of these skills and techniques and it appears worth nurturing further.

## 6. Future Work

This Community of Enquiry approach being developed with our undergraduate students is work in progress. It is still at an early stage and the data gathered as evidence for how it is influencing learning

is based on participant observations in the classroom setting, and interviews with some of the students involved in this project. So far we have merely 'dipped a toe in the water' and the students' responses have been encouraging. Through this Community of Enquiry approach they have been encouraged to frame their own questions and to 'evaluate evidence, arguments and assumptions' all of which is appropriate in terms of expectations for those studying for qualifications at level six [11]. However, in order to develop this further the next stage will be to research the students' perspectives on this approach to learning in more detail and depth. It is planned to structure this around the six learning habits identified above to discover more about the students' perceptions of the extent to which these are being promoted through participation in a Community of Enquiry and importantly, the meanings they attach to this. It is also planned to advance the development of students in the role of enquiry facilitators in order to increase student autonomy and control over this learning process.

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# "Going the Other Way": the Perceptions, Experiences and Needs of UK Learners as 'International Students' in Higher Education

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## Abstract

*Literature and research studies on international students are dominated by a focus on non-native speakers of English entering higher education institutions (HEIs) in Anglophone countries. In an attempt to go some way towards redressing the balance, this paper explores the perceptions, motivations and needs of UK students who decide to study abroad for part of their programme.*

## 1. Introduction

This extended abstract provides a brief justification for the focus of the paper, and outlines the key areas addressed in the study and its approach.

## 2. Literature review

Most of the literature on 'international students' tends to be uni-directional – in other words, it focuses on non-native-English-speaking students entering higher education institutions (HEIs) in Anglophone countries. A snapshot of such studies is exemplified by, amongst many others, Thorstenson [1], who examined the experiences of Asian students in the USA; Zhang and Brunton [2], who focused on Chinese students in New Zealand; and Tian and Lowe [3], who looked at Chinese students in the UK. This paper aims to address this relative lack of attention by scrutinising the perspectives of UK students who – in apparently growing numbers after a long period of decline according to the British Council [4] - decide to study abroad for part or all of their degree.

## 3. Analysis of findings

An analysis of existing research looking at issues faced by English-speaking students when studying overseas is followed by a discussion of survey data collected through an online questionnaire. This was completed by over 150 students, enrolled at six HEIs in different parts of the UK, who had all spent at least one semester studying at universities in different parts of the

world. The following three research questions formed the focus of the enquiry:

- What factors motivate UK students to study abroad?
- How do UK students describe their experiences of overseas study?
- How do UK students define and prioritise their needs as overseas students?

## 4. Contribution to knowledge

The paper aims to provide a critical examination of the students' motivations, experiences and needs as they endeavour to make the transition to 'international student' in what are for most unfamiliar educational and socio-cultural environments. This examination will involve an analysis of key themes, patterns and categories within the data.

## 5. Conclusions

These will pay particular attention to the teaching and learning dimensions of the students' experiences, and the strategies they employ to deal with cultural difference and social adjustment. An additional attempt will be made to identify the extent of 'experiential commonality' between UK and other groups of international students, and in the process to account for any key differences, while considering potential implications for HEIs.

## 6. Future work

Interview studies will be carried out to add depth and richness to the data collected via the online questionnaire.

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# A Model for Assessing Student Leadership Competencies Development in University

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## Abstract

*The study has designed a model for assessing student leadership competencies development and affecting factors in university. This case study is based on the findings in Fars province- Iran. 400 college students were randomly selected from 26 institutions. The study used qualitative (Focus group, individual in-depth interview and library) and quantitative (path analysis) methods. Numerous studies have been carried out examining the effect of involvement and environment variables, leadership attitude and leadership behavior on the student leadership competencies development. However there is little research conducted on the effect of leadership attitude and leadership behavior such as mediatory variable on the student leadership competencies development. This model, in fact, has addressed the above-mentioned issues. This model suggest that systematic thinking, challenging the process, inspiring a shared vision, enabling others to act, modeling the way and encouraging the heart are considered important in student leadership competencies development. The authors propose that student affair practitioners, need to rethink some of the key assumptions of their student leadership and practices in order to meet the needs of a changing student body. Also college and universities need to be cognizant of these differences as they develop leadership programs, training opportunities, leadership course and co-curricular and extracurricular activities.*

## 1. Introduction

According to the Council for the Advancement of Standards (CAS) in higher standards and guidelines [12] the development of leadership “empowers students to mature and develop toward greater levels of leadership complexity integration and proficiency over a period of time” .A recent study highlights the contrasts between College Students in the 1990s and College students today [6], [7].

"leadership is ultimately about change, and ... effective leaders are those who are able to effect positive change on behalf of others and society [5]. "Change ... is the ultimate goal of the creative process of leadership to make a better world and a better society for self and others”.

Astin argues that it is important to develop young men and women during their college years to become future leaders [1]. Leadership is considered to be a part of life long learning and multidimensional constructs involving competency (skills, ability, attitude, knowledge, and behavior), experiences and processes. Student leadership competencies development is a prominent theme and objective in higher education.

## 2. Literature Review

Rudolph [14] indicated that Harvard College, the first college in America, came into being early in the history of the colony (in 1936) because the society needed learned clergies and leaders. Increasingly, higher education is being turned to as a source for potential change give its significant role in developing leadership capacity among today’s youth “The reasons why it is so important to develop students to become future leaders during his or her college are primarily because leadership development that encompasses various activities and experiences will enhance the ability of college students to make a difference” [1] and prepare them for their prospective roles as tomorrow's leaders [14]. And, by doing so, benefit the individual, the institution of higher learning, and the society as a whole [4]. Students learn leadership skills through their involvement in in-class and out-of-class activities [10], [13]. Most of the involvement literature is based on Astin’s Theory of Involvement [1]. Factors positively affecting leadership development were living away from home, student-to-student interaction, student -to -faculty interaction, involvement in campus activities, and involvement in class activities [1],[13],[14]. Students’ involvement can make a difference in a variety of situations. Students can benefit from involvement in the

campus community. Such gains include students' satisfaction with the institution, positive effects on academic experience and degree completion, and leadership skills [2], [15]. Kouzes [8] asserts that leadership behaviors affect student leadership development. Wielkiewicz [16] also stated that leadership attitude (hierarchical thinking and systematic thinking) affects student leadership development. In the model, entry variables (exogenous variables) include involvement variables [1], [2], [15] and environment variables [1]. Mediator variables include attitude and behavior variables [7], [8], [9], [16]. Response variables (endogenous variables) include student leadership competencies (figure 1). As such, the issue of fostering the leadership development of college students is a crucial and inevitable one for today's institutions of higher learning. Developing student's leadership ability remains one of the most important tasks in higher education. This research examines the following hypothesis: Leadership behavior and Leadership attitude are significant mediator variables in relationship between environment and involvement as exogenous variables with student leadership competencies as an endogenous variable.

### 3. Analysis of Finding

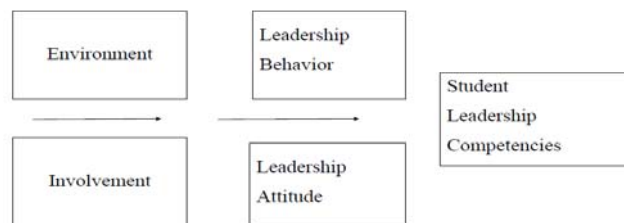
The study used qualitative and quantitative methods. Mixed sampling done by Morgan Table was used to obtain the desired sample. 400 college students were randomly selected from 26 institutions. The data were collected using the College Student Leadership Development Inventory (CSLDI) and Leadership Competencies Questionnaire (LCQ). The qualitative method was done by focus groups, individual in-depth interviews and library using triangular procedure. To test the theoretical hypothesis, structural equation modeling (SEM) was employed. LISREL was used to develop and test all structural models, in which multiple regressions was used and the goodness of fit was calculated. The statistical measures used to assess the goodness of fit for the covariance structural models were:

- 1) Chi-square
- 2) Root Mean Square Error of Approximation (RMSEA)
- 3) Standardized Root-Mean Residual (SRMR)
- 4) Non-Normed fit Index (NNFI)
- 5) Incremental Fit Index (IFI)
- 6) Goodness of Fit Index (GFI)
- 7) Comparative Fit Index (CFI)

The Figure 1 shows conceptual model of relationship between exogenous and endogenous. In this conceptual model there are two exogenous variables (environment and involvement variables), two mediatory variables (attitude and leadership behavior) and one exogenous variable (student leadership competencies). This research used Barron and Kenny steps [3] and Mackinnon [11]. Barron and Kenny have discussed four steps in establishing mediation:

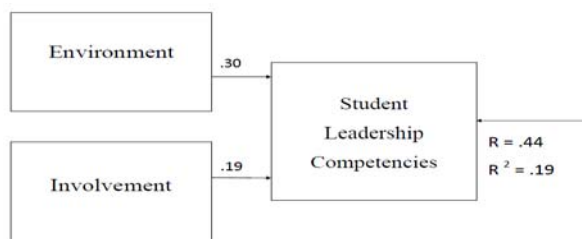
- Step1: shows that the initial variables are correlated with the outcome.

- Step2: shows that the initial variables are correlated with the mediator.
- Step3: shows that the mediator affects the outcome variable.
- Step4: shows the comparison of the coefficient calculated in step1 for exogenous variable to endogenous variable with these coefficients in step 3.



**Figure 1. A Conceptual model of student leadership competencies development**

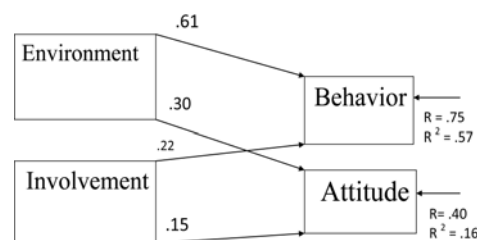
Figure 2 shows that environment ( $B=.30$ ,  $t=5.30$ ,  $p < 0.0001$ ), and involvement variables ( $B=.19$ ,  $t=3.41$ ,  $p < 0.001$ ), have positive and significant effect on student leadership competencies.



**Figure 2. The effect of exogenous variables on endogenous**

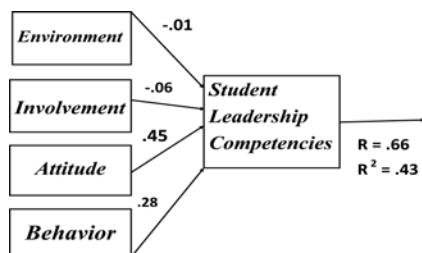
The Figure 3 shows that environment variable has positive and significant effect on behavior variable ( $B=.61$ ,  $t=14.69$ ,  $p < 0.0001$ ), and environment variable has a positive and significant effect on attitude variable ( $B=.30$ ,  $t=5.23$ ,  $p < 0.0001$ ).

Also involvement variable has a positive and significant effect on behavior variable ( $B=.22$ ,  $t=5.30$ ,  $p < 0.0001$ ), involvement variable has a positive significant effect on attitude variable ( $B=.15$ ,  $t=2.60$ ,  $p < .01$ ).



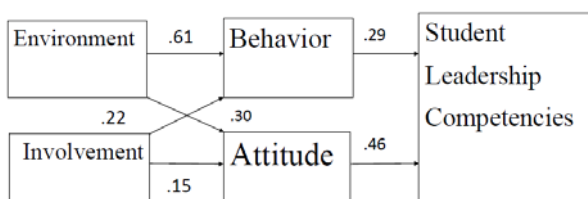
**Figure 3. The effect of exogenous variables with mediators' variables**

The Figure 4 shows the effect of mediator variables on student leadership competencies (endogenous variable) by controlling exogenous variable. In this figure both attitude and behavior variables have positive and significant effects on student leadership competencies, (B = .45, t = 10.12, p = .0001) (B = .28, t = 4.50, P = .0001), but involvement and environment variables do not have significant effect on this endogenous variable. (B = -.01, t = -.15, p = .87) (B = -.06, t = 1.20, p = .22).



**Figure 4. The effect of exogenous variables and mediator variables on endogenous variables**

The Figure 5 shows final model of student leadership competencies development.



Chi square = 17.48      df = 3  
sig = 0.0001

**Figure 5. Final model of student leadership competencies**

Fit measure of final Model shows the Table 1.

**Table 1. Fit measure of final Model**

Statistics for consistency tests	Conditions	Values and conclusion
RMSEA	0.06	0.05-0.08= acceptable
SRMR	.04	.01-.05=close fit
CFI	0.95	.95-.99=close fit
IFI	0.98	.95-.99=close fit
GFI	0.93	.90-.94=acceptable fit
AGFI	0.90	.90-.94=acceptable fit
NNFI	0.94	.90-.95=acceptable fit

$$Mediation = \frac{\sum aB}{\sum aB + \tau'}$$

Indirect effect =  $\sum aB$

direct effect =  $\tau'$

- 1) Mediatory role of behavior in relationship between environment and competencies equals (.73) that was significant at (p < 0.01).
- 2) Mediatory role of behavior in relationship between involvement and competencies equals (.65) that was significant at (p < 0.01).
- 3) Mediatory role of attitude in relationship between environment and competencies equal (.63) that was significant at (p < 0.01).
- 4) Mediatory role of attitude in relationship between involvement and competencies equal (.54) that was significant at (p < 0.01).

#### 4. Contribution to Knowledge

A lot of research conducted so far (reference) has focused on variables discussed above separately. This research however, has focused on the mediatory role of leadership attitude and leadership behavior in relation with student leadership competencies development. The role of each variable is taken into consideration. It is worthwhile mentoring that there hasn't been any model like this up to now. The calculated amount shows mediatory role of behavior and attitude between exogenous variables and competency variables. Based on the findings of the present study, the model has proposed that involvement and environment variables are predictors of student leadership development. These results are consistent with the findings of Astin [1], Kuh [10], and Pascarella and Ternzini [13]. The model also has proposed that leadership attitude variables and leadership behavior variables are all predictors of student leadership development. These results are consistent with the findings of Kouzes and Posner [8] Komives and et al. [7]. In the final phase by controlling exogenous variable, attitude and behavior leadership variables are mediatory for student leadership competencies. This model has acceptable goodness-of-fit indices as RMSEA (.06) and p-value (.08) indicated that the model fit the data very well.

#### 5. Conclusion

Facilitating student leadership competencies development directly and indirectly helps communities, societies, families and industries. The prior research showed that environment and involvement variables have positive significant effect on student leadership development [1], [10], [13], [15]. Also leadership attitude and leadership behavior have significant positive effects on student leadership development [7], [8], [9]. But this study has showed that the two variables attitude and behavior leadership are mediator variables in student leadership competencies development. Therefore the

mediatory role of leadership attitude and leadership behavior show the explanatory model. The individual in-depth interviews and focus group used in this study have provided a structured time for participants to reflect on their experience, as demonstrated in several comments from student leaders. The indicators of triangulation and conceptual modeling showed the same results. Increasing (promoting) student leadership competencies development demands pays special attention to the following issues: systematic thinking (relationship orientation, ethics, learning orientation change centered, and cooperative leadership process), challenging the process, Inspiring a shared vision, enabling others to act, modeling the way and encouraging the heart. Colleges and universities need to recognize that leadership attitude and leadership behavior as important factors positively affect student leadership competencies development.

These findings have practical implications for students, university faculty, and managers. These findings suggest student leadership competencies development is closely related to attitude leadership variables and behavior leadership variables. Therefore, attitude leadership variables and behavior leadership variables are mediatory for student leadership competencies.

## 6. Future work

- A longitudinal study of the effects of exogenous variables on the endogenous variables.
- A comprehensive, historical, and contemporary qualitative study should be conducted on the student leadership competencies in higher education.
- A more in-depth comparative qualitative study should be undertaken of the student leadership competencies in higher education.
- A quantitative study based on the following strata: gender, major and class rank.
- Other potential factors, such as pre-college
- Leadership experiences, parental education achievement, for student leadership development, could possibly be Predictive of student leadership competencies in higher education.

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## **Session 13: Curriculum, Research and Development**

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Bringing Theory in Line with Practice in the Classroom  
(Assia Slimani-Rolls)

School Infrastructure in South Africa: Views and experiences of educators and students  
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Can Japanese Lesson Study serve as an effective professional development model for Ontario secondary school mathematics teachers?  
(Deidre Wilson)

# Curriculum as Process and Praxis: an ODL Perspective

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## Abstract

*This paper reports on a recent two-year study undertaken to help embed quality issues into curriculum processes at Unisa, South Africa's dedicated distance learning university. Entitled Quality Programmes, Quality Materials, the study began with an exploration of the current state of curriculum development at the university in light of its recommitment to an open distance learning (ODL) model and this was interrogated further through the development of three gap analysis reports reflecting design, development and 'delivery' phases of the curriculum process. The analysis, taken together with recent ODL initiatives within the university, led to the development of a proposed new protocol for curriculum development. The paper concludes that curriculum must be understood as a process of constant re-invention and innovation based on post-modern and hermeneutic processes of enquiry.*

## 1. Introduction

The University of South Africa (Unisa) merged with the Technikon Southern Africa (TSA) and Vista-Vudec on 1 January 2004 to become a single, comprehensive institution, a 'new' Unisa. It was the first university to bridge the gap between university and technikon education and is South Africa's dedicated distance learning institution committed to the practice of open distance learning (ODL).

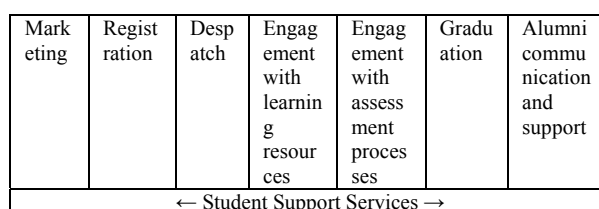
The particular project that informs this paper focused on one of the core distinguishing characteristics of Unisa as an ODL institution, the development of learning programmes and materials.

## 2. Objective of the Quality Programmes, Quality Materials project

In many ways, increasing demand for education provision coupled with decreasing government subsidies in real per capita terms has forced higher education institutions to operate in more businesslike ways.

Unisa's primary 'clients' from this perspective are the students who enroll for its programmes.

These students encounter the institution in fairly easily definable stages, as somewhat crudely illustrated in Figure 1 below, and take away from the institution, and communicate to other potential students, an impression of the institution that is the sum total of all these experiences which represents the value-added chain of the service that has been offered.



**Figure 1. Key stages in student engagement with an ODL institution**

The purpose of the Quality Programmes, Quality Materials (QPQM) project was to establish and embed a quality assurance framework of continuous improvement of academic programmes within a well-conceptualised, integrated course design and development process, taking cognizance of the critical principles underpinning the value chain of ODL, as relevant to the particular context of Unisa.

A secondary purpose of the project was to trial a process for the development of a quality assurance framework in other areas of the value chain of service delivery within an ODL context.

### 2.1. Principles of open learning

The project was informed by the South African Department of Education's 1995 White Paper on Education and Training which understood the concept of open learning thus: Open learning is an approach which combines the principles of learner-centredness, lifelong learning, flexibility of learning provision, the removal of barriers to access learning, the recognition for credit of prior learning experience, the provision of learner support, the construction of learning programmes in the expectation that learners can succeed, and the maintenance of rigorous quality assurance over the design of learning materials and support systems. [1]

The underlying approach expressed above begins with a specific purpose – to develop strategies of



educational provision which, in an affordable way, can overcome barriers of access to and success in meaningful learning. Distance education on the other hand represents a set of methods that has the potential to help realize this purpose.

## 2.2. The changing nature of distance education and the notion of e-learning

The Commonwealth of Learning (COL), a reputable and active role-player in ODL, defines the concept distance education as follows: The delivery of learning or training to those who are separated by time and space from those who are teaching and training. The teaching is done with a variety of “mediating processes” used to transmit content, to provide tuition and to conduct assessment or measure outcomes. [2]

Much of the discussion about the methods of education provision associated with distance education revolves around the apparent ‘problem’ of needing to overcome the separation between students and their teachers. Moll however offers a slightly more positive variation on this understanding of the challenge: In distance education the central problem becomes how best to create a situation in which learners are able to engage in and be supported in a particular, unfamiliar activity – a knowledge practice – without having to be in the constant presence of practitioners of that activity. [3]

Over the years there have been many attempts to address this challenge and it is possible to identify different ‘evolutionary generations’ of distance education provision. The evolution of distance education can be understood as a parallel process of both pedagogic and technical development. [4]

With the introduction of the World Wide Web, and in particular Web 2.0 capability, interest in web-based and ICT enhanced distance education and training has grown considerably. A primary reason for this is the Web’s potential to facilitate interaction and interactivity through networking. However, there is a difference between potential and actual usage. Unless programmes and materials are designed specifically to make appropriate use of the new technologies (including increasingly mobile-phone technology) the full potential of these technologies may not be realized. Provision of access to the new technologies also needs to go hand in hand with the development of appropriate knowledge, skills and values (among both teachers and students) in how best to use them to achieve pedagogic ends. [5]

## 2.3. The Unisa context

Since the merger in 2004, the new comprehensive Unisa has introduced revised tuition and assessment policies, budgeted for increased student support and from the end of 2006 introduced a web-based

presence for all programmes and materials offered by the institution through a sakai platform called myUnisa.

Cognisance however needs to be taken of the fact that the University has to respond to extremely diverse learning needs among its 280 000 students.

In addition, Unisa has a particular mission to support development in Africa more generally where access to even the most basic ICT resources is sometimes very limited, although some countries now enjoy better and cheaper bandwidth than South Africa.

In light of these challenges, most courses at Unisa are currently text-based (available as printed hard copy and/or digitally) but web-supported.

## 3. Research approach

The research process was based on four main existing bodies of research and research perspectives: systems theory, hermeneutics, critical theory and ODL. [6]

All of the above approaches needed to be grounded in understandings of African philosophical perspectives such as Ubuntu and the potential of indigenous knowledge systems given Unisa’s vision to be ‘...the African university in the service of humanity’. [7]

Research into distance education and open learning in South Africa points to a growing convergence between distance and contact modes of delivery [8] but acknowledges that there are still extremes of practice [9]. The research sought to draw out some of the convergences and tensions in developing a theoretical framework.

## 4. Research process

Information for the project was collected through a hermeneutic process of enquiry involving three main methods:

- Focus group interviews
- Participant-observer engagement in a number of Unisa ODL and quality assurance and promotion initiatives
- Document review including internal policies and procedures and a review of external policy, research and theory.

It was intended that the focus groups would explore the current expected or policy framework; actual practices and reasons for possible deviations; and suggestions regarding future policy directions. The focus groups were to be engaged with separately so that it would be possible to compare and contrast impressions across different stakeholders.

The findings were then to be located within a conceptual framework of ‘good practice’ and, in particular, the plans for future programme design and

materials development proposed by the Unisa ODL Project, to allow for a subsequent quality assurance gap analysis at three different levels of engagement viz design, development and 'delivery'. This would then inform the development and field testing of a model/protocol for future practice.

## 5. Analysis of findings

The project reports found there were many examples of good practice that were in line with internal and external quality indicators. However, the following key weaknesses were identified.

The university lacked an integrated system for the planning and monitoring of the entire programme and materials development process from design to review.

It was felt necessary to articulate more fully in guidelines for programme design and materials development how the university seeks to give effect to its vision and mission.

The investigation noted a tendency to focus on modules/courses rather than on the programmes of which they form a part and suggested this needed to be addressed with some urgency

It was recognized that planning teaching and learning support activities and an assessment strategy are important elements of the design decision-making process and concern was raised about whether the provisions in the Academic Human Resource Allocation Model does/will translate into practice and the probable need for a study of departmental and individual performance and time management

The reports called for improved internal and external liaison in the design process possibly through focused workshops with stakeholders, including Unisa support systems, tutors and past and present students.

It was also recommended that piloting and/or external critical peer reviewing of programmes, modules and materials, including assessment, should be standard practice and that programme review processes should be built into Departmental and College planning cycles over 3-7 year intervals.

The final Gap Analysis focused on issues of 'Delivery' as they relate to the notion of Quality Programmes, Quality Materials. What emerges from a review of current adult learning theory [10 – 13] is the realisation that meaningful learning – the kind of deep learning that changes the way people think, feel and behave – cannot be 'delivered'. It is a complex and iterative process in which individuals and groups interact and make meaning in a variety of ways and in a variety of contexts and involves more than simply the cognitive domain.

In order to bridge the apparent current divide, even competition, between teaching and research requirements, a more scholarly teaching approach

[14] should be followed and support given for the development and maintenance of communities of learning and practice [15 - 22].

A more systematic process is needed for the identification and tracking of programme design and materials development projects; and

Care must be taken to close the feedback loop into re-design and re-development by making more systematic use of student, tutor, graduate and employer feedback and impact analysis.

## 6. Recommendations

An analysis of the findings from the QPQM research process led to a set of recommendations in the form of a new protocol for Unisa which may be of interest to other institutions.

In seeking to fulfill its mandate, Unisa has adopted the following understanding of open distance learning (ODL) which underpins this protocol: Open distance learning is a multi-dimensional system aimed at bridging the time, geographical, economic, social and communication distance between: student and institution, student and lecturers/tutors, students and courseware, and student and peers. Open distance learning focuses on removing barriers to access learning, flexibility of learning provision, supporting students and constructing learning programmes with the expectation that students can succeed [23].

### 6.1. Overview of the draft protocol

The Figure 2 provides an overview of the suggested 'to be' protocol for programme and materials design and development.

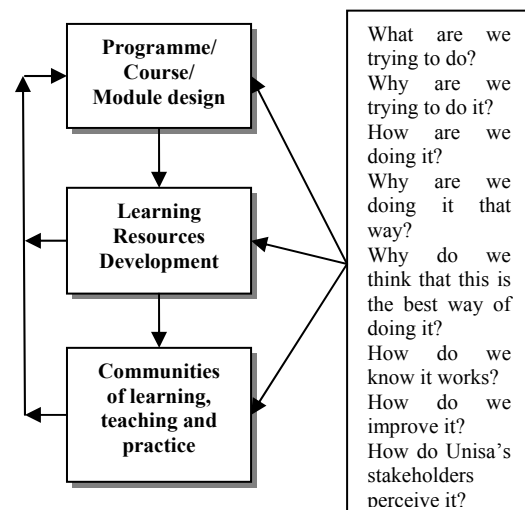


Figure 2. Overview of design/development protocol

The diagram seeks to illustrate the three interconnected phases in the life cycles of programmes and materials and how each of these phases should be informed by critical questions about assuring and improving quality.

All development cycles begin with a design phase. This covers all activities from the initial identification of a learning need, to conception of how that need can best be addressed through to development of a project plan to develop, implement and evaluate the programme and its materials. Even where the focus is on an individual module, cognizance must be taken of the relationship to the larger programme. The design phase includes making decisions about how students will access the programme; the teaching, learning and assessment processes and the identification and mobilization of the necessary supporting resources. Different decisions will be made based on the relevant learner profile and programme exit level outcomes.

The learning resources development phase involves the production, publication and dissemination of the learning resources including the necessary support systems. It covers activities such as the development of templates, drafting, critical reviews, production processes, stock control and dispatch or dissemination. It is possible that during the development phase, questions will arise that result in the design being questioned and perhaps revised. In other words curriculum development is seen as an iterative process not an event and the actual development pathway will vary from programme to programme.

The communities of learning, teaching and practice phase is concerned with how learning resources are utilized and with evaluation of their efficacy. It presupposes a focus on active student engagement, including interaction between students, and with how academic and support staff work together, including with stakeholders external to the institution, to ensure quality teaching and learning and the continuous monitoring and review of practice. During the processes of learning and teaching it is possible that gaps will be identified or assumptions disproved that result in the need to develop new/additional resources, or to revise the use of existing resources or even to revisit the initial design. In addition to ongoing formative evaluation, it is expected that the design phase will have planned activities for the formal summative evaluation of the programme and that these evaluation activities will demonstrably feed back into design and development review processes.

Each phase should be informed by the key questions and self-, peer- and stakeholder- evaluation processes that inform the Unisa Integrated Quality Management Framework [24].

## 6.2. The design phase

The design phase needs to align with academic planning cycles and is illustrated in Figure 3.

It should be noted that in order to meet the necessary deadlines for approval, the design phase of the programme and materials cycle needs to be completed by about March in any particular year and that formal approval will likely take until October. Feedback from the approval processes may necessitate further iterations of the design phase.

This means that the development of a new or substantially revised, module, course or programme can be expected to be a two-year process since approval needs to be obtained before investment in the development of resources can reasonably begin. This in turn implies rigorous advance planning on the part of programme and department teams.

The Figure 3 illustrates that all new development starts with academic ideas about what needs to change or be developed. This should result in some kind of preliminary proposal, backed by research evidence. In the case of a major revision of an existing module, or addition to an existing programme, this should be shared and discussed with other members of the programme team first. In the case of a proposal for a new academic major or programme, the preliminary proposal should be shared with the discipline and department to seek approval. Without this approval, the staff time commitment cannot be integrated into work plans.

In the curriculum planning phase, decisions need to be made about the nature of the design work that needs to be done. For a new or substantially designed programme it is probable that separate curriculum and module design activities will need to be scheduled with relevant role players. It is often the case that curriculum planning at the module level requires revision of the curriculum plan at the programme/major/course level. For the substantial revision of an existing module or the development of a new module to be added into an existing programme, the two design processes could probably be collapsed. It is advisable that where separate processes are envisaged that these happen not more than about three weeks apart in order to ensure continuity in thinking.

Having designed the curriculum and its constituent modules, it may be necessary and/or useful to discuss the broad design parameters of the various resources.

For each phase in the process, it is important to make explicit the key steps in the process, the links to the relevant guiding policy framework, the procedures that inform the process, useful documents and templates that might be used or adapted and to make explicit the quality criteria against which both processes and products will be judged.

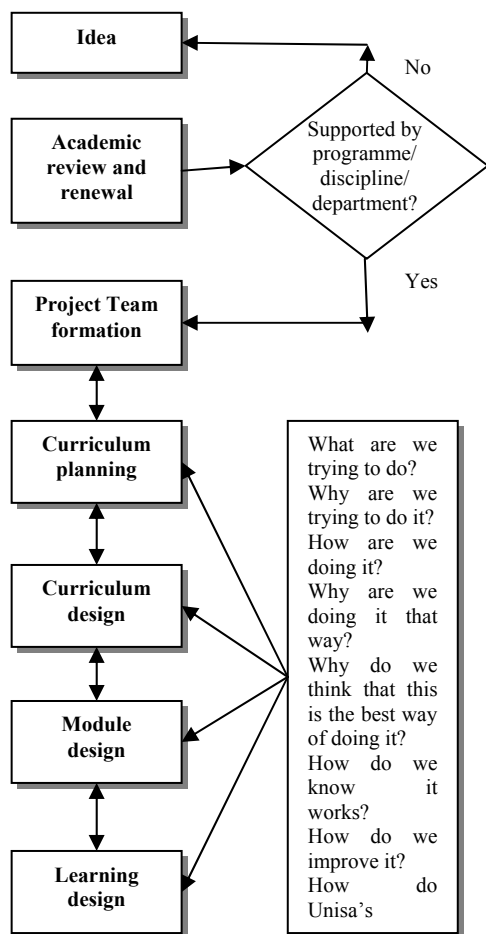


Figure 3. Key steps in the design phase

### 6.3. The development phase

The Figure 4 then unpacks the development phase itself which is informed by and which informs the larger design process.

Critical points for review during the development cycle for printed materials are:

- introduction and first unit – to review level, tone and ODL appropriateness
- first half of module – to review sequencing and progression
- first full draft – feedback from piloting with target learners and from external critical discipline expert reviewers; check that all learning outcomes/assessment standards have been addressed and content is accurate and contemporary
- second draft – feedback from a panel on overall programme coherence (the panel should comprise both discipline and ODL practitioners and they should look at the complete draft learning package including tutorial letters, non-print resources

and planning for learner support – e.g. myUnisa, discussion classes, tutorial activities, audio-/video-discussions etc.)

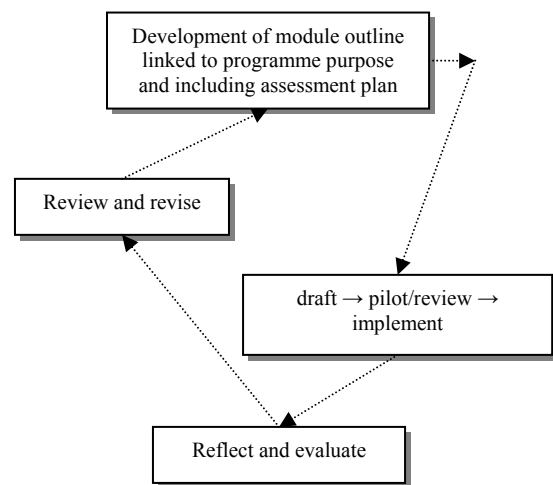


Figure 4. The development cycle

Where non-print-based materials form part of the learning package, these need to be integrated into the package and reviewed at equivalent key stages.

### 6.4. The communities of learning and practice phase

The protocol assumes that during the design and development phase teaching and assessment activities have been formulated that maximise learner interaction with the content, with the institution, with academic staff and tutors and between students themselves. Whilst accepting the role of students as active co-creators of knowledge rather than as passive recipients of knowledge generated by others, in an ODL context care must be taken not to underplay the teaching role in scaffolding learning pathways and experiences. Particular attention needs to be given to the transition phases from schooling to higher education and from under- to post-graduate study based on a deliberate agenda of nurturing increasing student autonomy. Care must also be taken to close the feedback loop into re-design and re-development by making more systematic use of student, tutor, graduate and employer feedback and impact analysis.

## 7. Conclusion

The Quality Programmes, Quality Materials project at Unisa identified examples both of exemplary ODL practice as well as areas in which practice could be improved. The draft protocol that emerged from the process seeks to provide sufficient guidelines to ensure that research-based quality

issues are infused throughout but also sufficient flexibility to allow for the degree of variation required in a post-modern paradigm and within an explicitly transformational institutional and national education agenda. This requires recognition that, whether for printed-text-based and web-supported courses that characterize most South African ODL provision at this time, or for e-learning and web-dependent courses which are growing in number, curriculum development is an iterative, hermeneutic process not a singular event.

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# Bringing Theory in Line with Practice in the Classroom

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## Abstract

*'Exploratory Practice' is a form of practitioner research. Using its principles as a research background, this work in progress report describes an innovative approach to continuing professional development which aims to guide a group of teachers towards developing a better understanding of their classroom practices in order to improve their teaching and the quality of their lives and that of their students in the classroom.*

## 1. Introduction

The programme involves the identification, description and investigation of 'puzzles', aspects which puzzle teachers about their teaching. Teachers transcribe the first 20 minutes of their lessons and identify teaching 'episodes'. The analysis of these episodes in workshops, and reflection on what this analysis means for the participants in terms of the interaction and the pedagogic decisions that they make during their teaching lead the teachers to elucidate the puzzles. The analysis is supported by workshops and related to the literature about teaching in Higher Education. The aims of the project are for the participants to

- identify 'puzzles' in their classroom situation;
- bring a reflective dimension to their teaching through the micro analysis of 'episodes';
- develop their research skills, in particular, analysis and interpretative skills to elucidate those 'puzzles' and
- achieve a better understanding of their classroom practices through the insights gathered during these reflections and analyses with the ultimate view of enhancing their quality of life and that of their students in the classroom.

## 2. Rationale

The Exploratory Practice is used as a background for this project [1], [2], [3]. Allwright explains that, prior to introducing any change to their environment, Exploratory Practice (EP) involves teachers and learners, to work together primarily for their own understanding and following their own agenda rather than the agenda of external agents [2]. For this advancement to happen sustainably and without

hindering the teaching process, EP recommends that teachers use normal pedagogical design to enable them to integrate the search for their understanding into their normal teaching routine, and not extra to it, so that their teaching, enriched with a research dimension, gets carried out for the mutual benefit of all concerned.

The author has used the EP principles with staff from the Languages Department to encourage the development of a culture of enquiry and research [5]. Subsequently, she wishes to extend the use of these principles to other contexts of learning, those of Law and Business Management, within the context of continuing professional development. The aim is to encourage her colleagues to make the search for understanding their classroom situations an integral and indefinitely sustainable part of their teaching enterprise. Continuing professional development is a topic of considerable importance within the higher education sector and in line with the author's institutional demand for teacher effectiveness. The College grants its staff some time relief a year to develop their professional advancement. EP empowers teachers to take charge of their progress and that of their learners away from a knowledge-transmission deficit model of teacher development. Although devised for the teaching of languages, the author believes that the EP principles should, in principal, work in the teaching of other subjects.

## 3. The Participants

### 3.1. The teachers

Four participants are involved: a teacher consultant who is a research practitioner and author of this paper, as well as three experienced teachers. One of them is a female teacher with an MA in French language teaching as a foreign language and the other two are male teachers and PhD holders in Business Management and Law. All three teachers have voluntarily joined the project to sharpen their understanding of their own teaching. An academic researcher from a British institution of higher education acts as a consultant to this project.

### 3.2. The students

They are first year university students studying for a BA in Business Administration in a private institution of higher education in London. They are aged between 18 and 20 and 60% of them are male. The students come from all over the world. English is, for the vast majority of the student body the second (28.9%), third (32.2%) and even fourth (20%) language of study.

## 4. Research Method

In adherence with EP principles, the teachers are put immediately in a position of expertise from which they can contribute to the elucidation of their puzzles. They focus on the analysis of their teaching episodes. Kiely and Davis [Forthcoming] define an episode as a segment of classroom interaction with boundaries which have a beginning and an end; a centre of gravity with a thematic unity and potential significance in terms of learning [4].

The teachers videotape one of their lessons in week 2, 6 and 9 of their 12 week teaching term. They transcribe the first 20 minutes of their 50 minute long lessons. The transcripts are then used to understand the puzzles in the teaching episodes which they feel have worked well or otherwise. This process provides the participants with the opportunity to familiarise themselves with their teaching, reflect on the rationale of the decisions that they make. It also provides them with the opportunity to develop specific research skills included in the construction of an episode as qualitative data, link specific practices to theories of interaction, autonomy and learning, develop a grounded analysis of phenomena observed, and relate specific instances to a more general account of practice. These opportunities are facilitated through workshops and group discussions.

## 5. Preliminary Findings

Because of space limitation, only puzzles about students' engagement with the classroom events and reading habits will be briefly presented. Their elucidation is still in progress.

### 5.1. The evolving puzzle of students' engagement

From the moment the participants joined the projects they wanted to develop their students' engagement with the classroom interactive events hence the choice of examining classroom transcripts as a potential way of elucidating this puzzle.

Engagement was defined by the participants as showing interest, verbally or through body language, to the classroom events.

Following the analysis of their teaching episodes, the teachers reported the occurrence of cases of much desired engagement by the students which reflected elements of co-production, intersubjectivity and fine tuning with the classroom events. But one participant remarked that these were scarce in his teaching and puzzled as to '*why do the students not engage more with my lessons?*'. All three participants agreed to investigate this puzzle as they felt concerned by it as well.

A group discussion was set up to examine how engagement was or was not happening in the selected episodes and what prevented or facilitated it. The following points came up in the discussion- that silence did not necessarily indicate a lack of engagement; affective, social and cognitive variables could inhibit verbal engagement as well as the format of the lesson, the teacher's behaviour, the socio emotional climate of the classroom, etc.

The analysis of the excerpts soon turned the initial puzzle from 'why the students do not engage more with my lessons' to '*why don't I let my students engage more with my teaching?*' Because of space limitation, only the following cases will be reported.

Excerpt 1:

Teacher [T]: Do they [organisations] have a moral obligation to us as members of our society?

Student 1 [St1]: *They have moral obligations if they're inflicting that kind of damage on the surroundings.*

T: I don't disagree with you, but legally are they right or wrong?

St2: *Being legal is different from being moral. For example, right now it's legal to get an abortion in the States, but not everybody thinks that's moral.*

T: So, where do we draw the lines for an organisation in our society? Do we expect them to bring more to the table than just to make profit? I'm now going to show you something (a video clip) that we're going to talk about today.

Excerpt 2:

T: --- well he [st4] says he's here to make money, not to save the world.

St3: *That's selfish.*

St4: *If I'm not selfish, I won't make money.*

St5: *You can have money and be a socially responsible company. You increase your profit if you are responsible.*

T: Let me show you something [a 30 second long advertisement of a company].

The two excerpts happened within the first 15 minutes of the start of the same class. Students 1, 2, 3, 4 and 5 made sharp and constructive contributions to the classroom discourse which, unfortunately, were not acknowledged and used as a resource for further class involvement. Instead, the teacher went on delivering his planned teaching materials. Other examples, similar and/or of a different nature were also extracted from the transcripts indicating that the teachers were not necessarily sensitive to and opening ways for students' engagement.

The identification of such excerpts made the teachers realise the importance of the transcription of the first 20 minutes of the lessons. They were impressed by the information that the transcripts revealed on the management or, in the above two cases, rather mismanagement of the students' participation. Reasons explaining the teachers' behaviours were put forward and ways of endorsing such engagement were discussed.

Seven weeks elapsed between the first (week 2 of the 12 weeks term) and third recording (week 9 of the 12 week term). This time the participants showed more familiarity with the identification and interpretation of the episodes. One transcript showed that a teacher had deliberately organised an activity to control her interference with the learners' engagement. However, the transcript examination of the other two participants did not show much progress in allowing for students' involvement. One of them demonstrated a definite emphasis on breadth of coverage rather than depth of learning through the use of a power point presentation thus ignoring or even blocking, on occasions, the students' contributions. He explained that, to begin with, he consciously paid attention to his students' interventions but had then relapsed into his 'old ways' towards the end of the term. Moreover, he agreed that, the way he had so far used, power point presentations did not facilitate his students' engagement.

Among topics which are precluded here for limited space, the group discussed ways in which such a type of presentation could be adapted to facilitate the construction of new knowledge in the classroom and with the students' contributions.

## 5.2. The Puzzle of Students' Reading Habits

Overall, the students' reading habits are generally assessed as poor by the staff. One participant expressed the frustration that his students do not necessarily do the readings that he normally sets for them in preparation for the lectures and seminars

often causing his plans for reading based discussions to be cut short. The participants felt that investigating the puzzle of '*why students do not do their readings*' could highlight their level of engagement, their motivation and attitude towards learning as well as their skills, at least, in the English language given that the vast majority of the student body is international. A group discussion evolved then around whether and how the teachers make it important and imperative for the students to read.

The participants designed a short questionnaire to highlight the volume, the difficulty of the readings whether conceptually and/or language wise, the need for teacher guidance or otherwise and the source of their readings. Here are some of the questions and their results. This approach is not wholly in line with the principles of Exploratory Practice (EP) which emphasises the use of classroom practice as the focus of the investigation. However, in teaching subjects other than foreign languages in higher education, extensive reading is a normal learning activity which supports classroom practice. Also, in this context, using surveys to understand student needs or teaching effectiveness is a routine aspect of pedagogy. For these reasons, we agreed to incorporate this investigative activity as a first stage in addressing this puzzle.

The survey revealed unexpected results given that 82% of the students responded that they find the volume of readings fair and 70% did not find the readings difficult rejecting therefore some of the staff's apprehensions.

*To how do you feel about the quantity of readings you are required to do?* 82% of the students responded that the quantity was fair as opposed to 12% who responded that too many readings were requested and only 5.6% responded that not enough were requested.

*To how many readings do you do during the week?* 62% responded that they do enough to get by and 32% do enough to do well in their course. Only 5.6% responded that they do not read.

*To are the readings difficult to do?* 70% responded negatively and 30% responded positively.

Furthermore 84% did not find the readings conceptually difficult and 91% did not feel their English level prevented them from coping with the reading tasks. Some 47% felt that more guidance by the teacher would be helpful but 53% felt that guidance was not required.

More striking, however, is the response to the reading frequency of some sources which appears to be at odds with the teachers' claims about the students' lack of reading. The analysis revealed that 85.6% of the students read Internet texts every day or



3 to 5 days a week, 63.3% read newspapers while 43.3% read their textbooks and only 17.7% read academic journals. Hence, there appears to be a mismatch between the teachers' and the learners' understanding of what constitutes reading, which further investigation of the issues, and engagement with the literature on new literacies may explain.

## 6. Difficulties encountered in the early phase of the project

The project is on-going but has not been without its difficulties. These show how complex is the cultural shift that is involved in getting teachers from 'just' teaching to data-based reflection on their practice because the actual procedures in identifying data to reflect on involve new skills, take time and seem, a priori, to require some familiarity with the research literature which the practitioners may not have.

It was somewhat difficult for the participants to take full ownership of the project. They explained that, although this was the reason why they joined the project, it took them a while to become accustomed to analysing their teaching, in particular, their classroom practices when they have been on 'auto pilot' for so many years. To begin with, the participants found it difficult to know what they were looking for in the transcripts. They had to be regularly reminded that the induction into developing teacher research skills is led by practice and the practice of experienced teachers is intuitive. As such, some searching which may seem inefficient, directionless and unfocussed at first may just be an inevitable part of the process. There were also expectations to provide development and fast technical solutions, fluctuating attendance to workshops and meetings due to time constraints given that two of the participants are part-time staff working in 2 and 3 different institutions across the City. This is the situation of many staff in the higher education sector in the UK.

## 7. Conclusion

The present study was motivated by the idea of developing a better understanding of the teaching learning environment of a group of teachers. This is one of the tenets of Exploratory Practice which calls for 'understanding' in order to improve the quality of life in the classroom through the identification and elucidation of teachers' puzzles. The preliminary investigation of '*why the students do not engage more with my teaching?*' has, following the teachers' analysis of lesson transcripts, evolved into '*why don't I let my students engage more with my teaching?*'

The transcripts show that the teachers' particular use of power point presentations, their need for 'performing' to demonstrate their expertise, their somewhat lack of recognising that students do not come to their classes as clean slates as well as the priority teachers give to covering the lesson plan are only some of the aspects which seem to have come in the way of the students' contribution to the classroom discourse. As such, the teachers' behaviour seems to encourage a transmission rather than a collaborative type of learning culture where both parties- teachers and learners- contribute to the construction of the classroom events.

The analysis of '*why the students do not do their readings?*' indicates that students read but they tend to read less traditional sources such as internet texts which are not, evidently, on the students' reading list.

Despite the difficulties that the teachers had first encountered in their activities of transcribing and analysing some of their lesson transcripts, soon they realised their relevance and the impact they have on the quality of life in the classroom. The fact that they, themselves, have highlighted and refined the puzzles as well as identified and analysed the teaching episodes which they felt have worked, or otherwise, constitute development. One of the teachers explained that 'this project has made me realise that teaching is not about demonstrating my expertise but about how to convey it effectively to the students.'

## 8. Future Work

Following the principles of EP, collegiality is crucial. It is not until Slimani-Rolls [2003] and Zhang [2004] included their learners in the search for a better understanding of their learning teaching environment that they reached their objectives and improved their quality of life and that of their students in the classroom.

### 8.1. Students' Engagement

The puzzle will be investigated further with the learners through surveys or class discussions to see how they feel about their level of engagement, what facilitates and/or prevents it. Moreover, more video lesson recordings will be carried out to establish whether, as a result of attending workshops and carrying out episodes analysis, teachers have or otherwise managed to adapt their decisions to facilitate students' engagement with the classroom events.

## 8.2. Students' Reading Puzzle

Although the students are expected to have a degree of autonomy in the decision making towards the timing and quantity of readings they do, still there are expectations but also structures to be provided to enable them to accomplish some basic reading tasks on time. One option would be for the teachers to follow up the issues with the learners using interviews, group interviews or focus groups to attempt to clear up the mismatch of views between the teachers who feel that the students do not read and the latter who claim the opposite.

## 9. Acknowledgement

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# School Infrastructure in South Africa: Views and Experiences of Educators and Learners

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## Abstract

*Researchers across the world are increasingly focusing on the quality of the learning environment as an important contributor to student outcomes. This paper explores the views and experiences of educators and students as they pertain to school infrastructure and is part of a larger project that examines ways in which school infrastructure in South Africa is developed, delivered and maintained, as well as its relationship to student learning. A multiple-case study design was employed and data collected through questionnaires, observation, student drawings and individual and group interviews. Secondary data were collected from directorates in the National Department of Education. Preliminary analyses revealed concern about the state of sanitation facilities, littering and vandalism; lack of safe and inviting spaces in which to play and socialize and lack of sport equipment and facilities among students. Educators shared the concern of students about the poor state of sanitation facilities and lack of sport equipment and facilities. In addition, educators expressed concern about overcrowding and a wish for computers in order to expose students to modern day technology.*

## 1. Introduction

This paper explores the views and experiences educators and students hold about school infrastructure in three school districts in South Africa. At a broader level, the study is guided by the research question: How do school infrastructure levels and quality promote or inhibit learning, teaching and leadership?

Conceptualization of school infrastructure varies across contexts. Fisher divided school infrastructure elements into structural and cosmetic factors, while Boissieri described it as “hardware” and “software” [9], [1]. Structural factors, according to Fisher, include building age, windows, flooring, heating, colour, student

density and size of the site, while cosmetic factors include interior and exterior painting, graffiti, furniture, school grounds and landscaping. Boissieri described “hardware” as school buildings, classrooms, furniture and sanitation and “software” as curriculum, textbooks and writing materials [1]. In the South African National Education Infrastructure Management System (NEIMS), school infrastructure elements include the number of learners per teacher, sanitation facilities, water on site, electricity, computers, furniture and communication technologies. When the *National Policy for Equitable Provision of an enabling School Physical Teaching and Learning Environment* and the *National Minimum Uniform Standards for School Infrastructure* are considered, it appears that the South African conceptualization of school infrastructure is more consistent with Boissieri’s conceptualization of infrastructure as “hardware” [1].

Just as conceptions of school infrastructure differ across contexts, so do priorities for school infrastructure provision and maintenance. In developed settings, for example, school infrastructure elements such as student density, aesthetics, technology, heating, and lighting assumes greater importance than in developing countries. In South Africa, the emphasis is on provision of basic infrastructure, i.e. classroom space, access to water, sanitation facilities and electricity. Considering the huge school infrastructure backlogs in the majority of schools built by the apartheid government, as well as limited public funds during the post-apartheid years, improving school infrastructure quality and levels proves to be a daunting task. According to the NEIMS (2006), South Africa has made progress in addressing the backlogs in the provision of classrooms, sanitation facilities, water on site and electricity. However, almost 80% of schools did not have library space and about seven percent has stocked libraries. Of the high schools surveyed, about 12% had stocked laboratories. The national Department of Education (DoE) admitted that “improvements ...

have progressed without a clear policy framework” [4]. Thus, they developed the *National Policy for Equitable Provision of an enabling School Physical Teaching and Learning Environment*, followed by the *National Minimum Uniform Standards for School Infrastructure* to guide the provision of school infrastructure.

## 2. Literature Review

Literature on the physical learning environment and its association with educator and student attitudes, behaviour and success, was reviewed. Literature on views and experiences of school populations in particular was reviewed.

Ways in which school infrastructure or the learning environment has been conceptualized evolved over time. Traditionally, “concern with the physical environment of the school has been limited to the establishment of minimum standards for size, acoustics, lighting and heating,” with little regard for learning and teaching [14]. Weinstein reviewed studies on the impact of classroom environments on student behavior, attitudes and achievement. She considered environmental variables such as classroom design, crowding, noise and the presence or absence of windows, studies from an ecological perspective and the effects of open space school design. She concluded that the classroom may affect attitudes and behaviours such as attendance, classroom participation and aggression levels; and called “for more synchronized efforts on the part of investigators” studying the physical aspects of the learning environment. This call was repeated by Duke, recommending that researchers from fields such as architecture, engineering, environmental psychology and education collaborate on comprehensive research instead of working on specific variables in isolation [6]. Weinstein decried the dearth of studies on “the relationship between physical design and educational program” and described it as a key gap in the learning environment knowledge base.

Later conceptions of the physical learning environment were a considerable expansion of the traditional view. Duke, for example, listed physical variables such as “building age, ventilation, visual factors, color of interior of facilities, amount of space, design of space, lighting, site size, building utilization, building maintenance, special instructional facilities, and school size”, identified by McGuffey from studies that sought to link them with learning. Duke

added “other physical variables such as site location, security features, access for individuals with disabilities, and aesthetic appeal” [6].

During the 1990’s, publications about school infrastructure or facilities in the United States mostly focused on the poor state of facilities with very little analysis of its potential contribution to the success of educators and students. A growing body of literature aimed at gaining more insight into what constitutes an optimum learning environment and ways in which school infrastructure contributes to learning and teaching success emerged over the past decade. The focus shifted from identifying elements of the physical learning environment and linking it to learning on a broader level, to the link between the physical dimension of the learning environment and educator and student attitudes, behaviours, health, morale and success [9], [10], [1], [15], [13], [2], [8]. Researchers started viewing school infrastructure as part of the ecology of student achievement [8] or as indirectly influencing student achievement [6]. A number of mediating or intervening variables such as absenteeism, attitude toward school, time on task and school climate, were found to be associated with school building quality, impact on student achievement [12], [15], [13], [2], [8].

Furniture, indoor air quality and class size are additional infrastructure-related variables that influence teaching and learning. Fisher (2000) cited research reports by the UNESCO Educational Building and Furniture Program that “uncomfortable and unsuitable furniture causes problems including backache, poor concentration spans and writing difficulties, thus reducing learning opportunities” [9]. Poor indoor air quality, according to TACIR, has implications for student and teacher health and may be linked to absenteeism, which in turn impacts on learning [12].

Research on the quality, adequacy and equity of the physical learning environment and its relationship with educational outcomes in South Africa is limited. Analysis of the 2006 PIRLS data revealed a moderate relationship between school infrastructure variables and reading achievement of South African learners.

The vast majority of studies into school infrastructure and its impact on learning and teaching employed quantitative methodologies. Describing research into the physical elements of “planned learning environments” as complex, Duke added that while the physical learning environment can be measured in terms of square footage, height, decibels, temperature, etc., the

way these environments are perceived and experienced may be harder to measure [6]. Nevertheless, researchers recently started documenting the ways in which educators and students view and experience the physical dimension of the learning environment.

In his review entitled *School Facility Conditions and Student Academic Achievement*, Earthman found teacher reports of “stressful and unpleasant working conditions” and student reports of poor concentration due to overcrowding. Teachers in overcrowded classrooms also reported that “they spend more time maintaining order and keeping the noise level down” [7].

Employing qualitative methodology, Uline, et al. explored the ways in which the physical features of two schools impact learning and teaching [13]. Preliminary findings indicated that “interactions between the design and reality of the built environment and the occupants of that environment helped to define the learning climate”. In return, the climate fosters a sense of control and competence and supports academic learning.

In their 2007 study, Simon, Evans and Maxwell surveyed fourth grade students in order to gauge their perceptions of and reaction to school building quality [11]. Students indicated that their most favourite space in the school building was the gymnasium/playground, followed by their own classroom, while their least favourite spaces were the cafeteria and bathrooms. Simon et al. cited previous research which revealed that, when asked about building quality, students often talk about bathroom quality. They described school bathrooms as “often dirty, noisy, undefensible, crowded spaces where children seek refuge from adults and other children, but have trouble obtaining it”.

The literature suggests a field riddled with complexities and increased efforts to start defining an optimum learning environment.

### 3. Analysis of Findings

Several preliminary themes emerged from the survey, interview and observation data. Drawings by primary school students provided insight into the kind of schools and classrooms they wish to attend. When asked to describe their classrooms or indicate what is good or bad about their classrooms, student responses are ambivalent – some described their classrooms as neat and tidy, while others described it as filthy and strewn with litter. Questions about sanitation facilities elicited

responses from all respondents; a majority of students (more than 75%) described the sanitation facilities at their school as filthy, smelly, or non-functional. One student had this to say; “Only about five of 16 toilets work. Almost all toilets have no lids or bowls.” Another remarked, “I never use the toilets at school. I wait until I go home in the afternoon.”

Students expressed concern about the actions of fellow students that reduce the quality or level of infrastructure at the school. These actions include littering inside classrooms and on the school grounds; writing graffiti on desks, classroom walls and ceilings; and vandalizing school infrastructure. Students are also concerned about maintenance-related issues such as missing doors or doors that cannot be properly closed and keeping classrooms tidy. Responding to the question “What is bad about the classroom in which you are taught?” one ninth grade student noted: “It is filthy and the janitors do not sweep the floors regularly. I do not think it is the job of the teachers or children.”

Both primary and high school students expressed a wish for school grounds or play grounds that are inviting, safe and free from hazards such as glass shards, rocks and thorns. One ninth grade student proposed that seating be provided and trees be planted so students will have a decent space in which to spend recess.

Educators mainly expressed concern about overcrowding and lack of classroom space. Some have to share the use of sanitation facilities with students and opt not to use these facilities while they are at school. One teacher remarked; “I never drink or eat anything that will cause me to use the sanitation facilities at school.”

When asked what they would change about school infrastructure, educator responses reflected concern for the interests of students. For example, a majority indicated that, given the opportunity, they would provide sport grounds and facilities for students. It was ironic that educators in two schools with low levels of physical infrastructure expressed the need for additional space to fulfill the provincial education department’s requirement of a dedicated room that can serve as a computer lab. Some educators indicated that specialized areas such as an art room, music room and a separate media centre for Foundation phase students would form part of changes that they would implement, if given the chance.

### 4. Contribution to Knowledge

There is a lack of empirical research on school infrastructure in South Africa. Thus far, three national audits of school infrastructure (School Register of Needs, 1996 and 2000 and the National Education Infrastructure Management System [NEIMS]) have been conducted. These audits focused on the quantitative dimensions of school infrastructure. International research on school infrastructure is mainly located within the positivist paradigm. Few studies focusing on the qualitative dimensions of school infrastructure or the physical learning environment have been conducted. This paper adds a qualitative perspective to a field dominated by quantitative research and presents the voices of school populations on the kind of environment in which they like to learn and work.

## 5. Conclusion

It is remarkable how little school children and their educators want. Both groups are in agreement on their wish for clean sanitation facilities and to a lesser extent, sport equipment and facilities. High on the list for both primary and secondary school students is the wish for appropriate spaces where they can play or socialize. In addition, educators want their students to have access to computers in order to have some level of exposure to modern day technology. Donors and policymakers will do well by listening to the voices of school populations as they plan for development and delivery of appropriate school infrastructure.

## 6. Future Work

Preliminary findings of this study suggest that clean, functional sanitation facilities and safe and inviting spaces for play or socialization are high on the agenda of primary and secondary school students in South Africa. Future work will include an investigation into the provision and maintenance of these elements of school infrastructure and how such spaces can contribute to improved learning and teaching.

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# Can Japanese Lesson Study Serve as an Effective Professional Development Model for Ontario Secondary School Mathematics Teachers?

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## Abstract

*This paper suggests that if professional development opportunities for secondary school mathematics educators in Ontario were based on a modified version of the Japanese professional development practice of Lesson Study, teachers would be able to better implement the ideas in the Leading Math Success: Mathematical Literacy, Grades 7–12: The Report of the Expert Panel on Student Success in Ontario (2004) which called for improved instructional practices in mathematics education. The benefits and challenges of implementing professional development in the form of Lesson study are examined through six essential ingredients for creating healthy communities of learners: building community, constructing knowledge, supporting learners, documenting reflection, assessing expectations, and changing cultures.*

## 1. Introduction

Looking at how teachers learn and how they inform and improve their practice is the focus of this paper. Delivering professional development is a job in which government, school boards, and professional associations in Ontario are engaged in. What is the best way to increase teacher knowledge and skills and affect positive change in instructional strategy that produces deeper student understanding of curriculum and hence increased student success?

In mathematics classrooms, teachers are told if they use the *Targeted Implementation and Planning Supports*, TIPS 2.0 template for lesson planning; embrace differentiated instruction; use assessment for, as, and of learning; incorporate more manipulatives; and the use of technology effectively while keeping the mathematical processes (problem solving, reasoning and proving, reflecting, selecting tools and computational strategies, connecting, representing and communication) in the revised curriculum at the heart of every lesson, they will become more effective in their instruction. How do they accomplish all this? How do teachers become

skilled in all of the above? To find out, the Ontario Ministry of Education established an expert panel, in 2004, comprised of education and community leaders from across the province, to report on instructional and assessment strategies to help all students and especially struggling students, develop the mathematical skills and understanding they need for the 21<sup>st</sup> century. The report [1] called on educators to “adopt the best mathematics instructional and assessment strategies for *all* students”. But where do teachers see these strategies in practice? The ideas for mathematics instruction, in the report from the expert panel, are not new, yet many teachers have failed to adopt them. The 2008 report by Canadian Council on Learning (CCL) on the ministry's Student Success Strategy found that, “Despite considerable variation among students in their preferred learning styles, secondary schools have traditionally given prominence to verbal and symbolic learning” [2]. Students need more than just verbal and symbolic learning. They need opportunities for inquiry and ‘hands-on’ learning too.

Ontario's latest strategy, “coaching,” along with the use of Professional Learning Communities (PLC's) is what most boards employ to accomplish the goal of improving instruction. Still, when improving math instruction, Ontario teachers lag behind their counterparts in other countries. The Ontario Principals' Council's latest literature explains that for improved instruction, teachers need on-going professional and growth opportunities which are done most effectively by “job-embedded learning techniques such as PLC's or teams; peer coaching; and group lesson study”[3]. Can a job-embedded experience like Japanese Lesson Study (JLS) that uses experts, such as coaches, effectively and builds on the PLC's model of collaboration, better meet the needs for professional development for mathematics teachers in Ontario high schools?

## 2. Why Japanese Lesson Study

As a department head and vice-principal, there have been many opportunities to be involved in professional development from book studies to PLC's to moderated marking. But none have been as



promising as a recent opportunity to participate in a modified JLS during a Growing Accessible Interactive Network Supports (GAINS) project last year. Eight Teams representing eight secondary schools with their elementary feeder schools came together to do a modified JLS. Teams consisted of three to four secondary math teachers and two to four grade seven and eight math teachers. Teams were charged with developing two lessons over the course of the year, one for grade seven or eight and one for grade nine or ten. They were asked to start with Ministry TIPS 2.0 lessons and to develop a SMART notebook lesson to deliver on an interactive white board (IBW). Some team members also received specific training in differentiated instruction and effective questioning. Teams had scheduled meetings throughout the year to develop and refine their lessons. Mathematics curriculum leaders from the school board attended all team meetings to support the process and offer guidance. As a member of the school board's Numeracy committee, there was a chance to partner with the curriculum leaders to offer the GAINS project and opportunity to attend team meetings and to witness the teacher learning that took place. At the conclusion of the project, teams shared their completed lessons and reflections on the process, with the whole group. Teams completed an anonymous Likert-scale survey and gave anecdotal feedback through a website. The results of the Likert – scale survey showed a high level of learning from all participants in all the components of the project. Scores were highest for collaborative planning with teachers.

Having seen teams of teachers work together in PLC groups before; the added deliverable of a lesson, made this experience more effective at improving teacher knowledge and impacting classroom instruction. It focused the team and allowed them to start with previous knowledge and build from there. One team member made the following comment:

I was surprised at how much I did learn and how much my prior knowledge of lesson design was able to be transferred to this project. I worked with a generous team who gave of their time and shared their expertise to help develop my skills and the skills of other teachers who had less experience than me. We all learned together in a non-threatening way.

The teams came together to accomplish a very specific task, in a tight timeline and in doing so were able to develop a spirit of collaboration. This was a different form of professional development, where teachers were in charge of setting goals and hence teachers took ownership of their learning as seen in another team member's comment:

One of the most beneficial components of this experience was the opportunity to learn from other math teachers and to make connections between elementary and secondary math expectations. Learning about the IWB and GSP through the experience of creating a lesson was much more meaningful than typical conference style PD.

Teacher learning was the focus but student learning became the real benefit of the project as seen in this team member's comment:

Our successes came through the implementation of our lesson(s) to different classes where we had an opportunity to refine certain parts based on student reactions and behavior, and to build on new ideas for additional lesson parts (extensions or scaffolding etc.)

The final sharing day was a rich and powerful experience for all involved. The opportunity for teachers to share their learning with their colleagues increased their confidence in teaching and inspired this researcher to explore JLS further.

### **3. A brief description of Japanese Lesson Study**

JLS is a Japan model for professional development. Groups of teachers from the same grade and subject but from different classrooms come together to discuss issues from their teaching and develop research questions to investigate. Together they create lessons to respond to specific research questions. One member of the group teaches the lesson to their class while the others observe. As a group, they reflect together, discussing their observations which include student responses. From the feedback they re-write or modify the lesson. The next member of the group teaches the modified lesson and the process repeats until everyone has taught the lesson and the lesson has achieved its goals for student learning. The group records their reflections on their learning through the entire process. The lesson, student work, and the reflections on the learning of the group are shared with others. Open houses at the end of the year occur for groups of teachers from all over Japan to share the results of their JLS.

### **4. Teacher as researcher**

Who has the credibility to say what "best practice" is? Teachers, who practice "teaching" everyday in Ontario are usually removed from the

process of educational research on pedagogy and have little say in what is investigated through research. Kincheloe talks about how teachers do not live in the same professional culture as researchers and claims “knowledge in contemporary education is still something that is produced far away from school by experts in a rarefied domain” [4]. Ontario’s current professional development models appear to be more about informing teachers of the latest fads or advocating for the newest piece of technology, rather than about giving teachers time to engage in inquiry and reflection about their practice. Today’s professional development model of the “one-shot workshop”, where teachers are removed from their class and given either direction on a new teaching strategy, a new tool to implement in their class, or a new idea about teaching they need to give attention too, is ineffective. Insufficient time is allocated to interact with colleagues, explore areas where instruction has fallen short, practice ideas, and discuss their validity or usefulness and to refine those ideas. The concept of JLS encourages teachers to use their classrooms as places of inquiry about teaching and learning. The revised math curriculum in Ontario calls for a shift in teaching philosophy from a positivist approach where there is always an answer, to a more constructivist approach of inquiry, where students explore and discover possible answers. Darling-Hammond and McLaughlin in discussing policy that support professional development in an era of reform, suggest professional development must “engage teachers in practical tasks and provide opportunities to observe, assess and reflect on new practices” [5].

The role of professional development for teachers should be to honour, evaluate, and promote effective teaching. More competent and confident teachers as well as teachers motivated to continuously improve their practice can be some of the results of effective professional development. Collay, Dunlap, Enloe and Gagnon outline the following six ingredients for creating healthy communities of learners: building community, constructing knowledge, supporting learners, documenting reflection, assessing expectations, and changing cultures [6]. In my experience as a teacher and administrator, professional development has been more effective and able to accomplish its goals when attention has been given to all six conditions. JLS as a professional development model can satisfy all six conditions within the Ontario context.

## 5. Building Community

Effective professional development starts with the first ingredient of building a community of practice

where teachers feel a sense of belonging and responsibility for the professional learning of the group. JLS is very intensive, content rich learning where teachers come together for a shared purpose. Teachers in JLS are focused on their subject area and how to best explain it so students are able to communicate and demonstrate understanding of the lesson goals. The act of creating the lesson and observing it requires collegial support. The “closed door” of teaching is opened as colleagues work together to develop the lesson and observe each other in their classrooms teaching the lesson. The isolation factor of teaching is diminished. Teachers see colleagues in the act of teaching and teachers are able to receive feedback on their actual practice. But, there needs to already be a foundation for collaboration for JLS to be successful [7]. Just as in PLC’s, attention to building a learning community, creates a safe place to experiment and take risks. Teachers need to be taught how to work collaboratively and need to see a value for collaboration.

It may be unrealistic for teachers who probably have very different teaching styles and educational philosophies to engage in a smooth lesson planning process.[8] Teachers will need direction and protocols to overcome this. TIPS 2.0 lessons can give Ontario math teachers a common place to start. These ministry tested lessons can be taught as is, observed and critiqued to begin the process. Teachers would also avoid feeling personally critiqued starting with the TIPS 2.0 lesson as opposed to their own lesson idea. Just as they assign roles to their students, when doing group work, teachers will need to practice this process too until they develop an effective working collegial atmosphere.

One of the most difficult parts in JLS for teachers, is teaching in front of their colleagues. In research projects in New Jersey and New York on JLS in the United States, every teacher involved described feeling nervous about teaching in front of others and the about the follow-up discussions after the public teaching [9]. Paying attention to building a collaborative community is necessary to creating the trust among the group and to be able to constructively critique the lesson.

## 6. Constructing Knowledge

The second ingredient required for effective professional development is constructing knowledge, or making meaning – the process of learning towards purpose. To *know of* teaching is very different than to *know about* teaching. Knowing of teaching is being able to give a definition and characteristics. However knowing about teaching is being able to use practical experience to explain how it changes for each unique

student. Teachers construct knowledge about teaching by watching, doing, and discussing. Teaching is a cultural activity. Much of what teachers know about teaching has been learned in their experience as a student from elementary school through to university. Speaking specifically about mathematics teaching, Suurtamm and Roulet suggest that “since teachers often teach in ways they were taught, they need to personally develop an understanding of new mathematical concepts through the process of investigation and modeling for it to have meaning for them” [10]. Because most people repeat what they have experienced, teaching strategies have not change significantly over the years. Stigler and Hiebert[11] claim that teaching practice has remained stagnant and resistant to change because there has been little or no opportunity to learn how to improve teaching skills. However, JLS is professional development grounded in classroom practice where teachers can affirm or learn new practice by watching and experimenting with other teachers. “Lesson study work...seems to provide a comfortable forum for teachers to tackle challenging ideas about their practice” [12].

Because JLS begins with teachers developing a research question, teachers who have not had experience developing research questions could struggle to adopt this research lens. Japanese teachers in JLS see themselves as researchers conducting an empirical examination, organized around asking questions about practice, and designing classroom experiments to explore these questions. Fernandez et al., suggest that “teachers will need to develop a disposition towards their practice that is grounded in a vision of teaching as a site for learning and of themselves as actively in charge of their ongoing learning process” [12]. Since most teachers have not seen themselves as teacher researchers or their classroom as a site for teacher learning, this concept could be challenging. For math teachers in Ontario, detailed EQAO data, and Ministry summaries of common findings on the tests could be a starting point for new teacher researchers. This data could lead to questions such as gender differences in learning, gaps between report card marks and EQAO results. Teachers could also align their research questions with school and board improvement plans.

JLS compels teachers to focus on observing student understanding so they can assess the goals they have set. When students struggle to demonstrate understanding of concepts, teachers in the JLS work hard to try and find new methods of teaching that could engage all students and build more student understanding. In a very recent Canadian JLS [13], teachers felt their focus on instruction had been brought to a new level. Teachers will look to

differentiated instruction, manipulatives, and technology to provide structures and tools to improve their instruction and reach every student. Teachers in JLS come to embody the philosophy of differentiated instruction which is responsive teaching. JLS “is meant to be a generative process through which teachers continually improve and redirect their teaching as needs arise from their students and classrooms ...it is intended to encourage teachers to adopt practices based on dynamic experience and deep reflection” [8].

## 7. Supporting Learners

A third ingredient is support for teacher as learner. Dalring-Hammond and McLaughlin, claim that effective professional development must “provide support through modeling, coaching and the collective solving of problems” [5].

In Japan, teachers in JLS work with an outside observer or expert who encourages exploration and keeps participants focused on their research question and their goals for learning. With the new coaching model in Ontario, coaches can become the critical friend in a lesson study. Coaches can demonstrate new teaching techniques to try or set up presentations from experts; they can introduce new ideas from research or make new technology available with which teachers can experiment.

In several JLS studies in the United States, such as in Highlands Elementary in California, schools used current research or student data as the expert to help teachers form their research question. Lewis et al. pointed out that “discussion of student work helped team members pinpoint students’ difficulties and design the research lesson” [14]. Around the world, educational leaders and teachers are increasing being asked to make data-driven decisions about education. JLS can call on teachers to make instructional decisions based on student data, whether collected from teacher observations, classroom tests, assignments or activities, or outside measures like EQAO in Ontario.

The process of JLS also allows teachers to be involved in “real-life” group work. Too often teachers have been told to meet in PLC’s but have had no training or practice working in groups and have little understanding about what they are suppose to do in their PLC. According to Lick effective teams require significant new competencies, including formal training and coaching” [15]. JLS has a beginning, middle and end and helps to add a framework to the PLC meeting time and usually has experts that provide coaching. As teachers work on the lesson, they all have distinct roles to play such as, creating, observing, reflecting and discussing. This

modeling of “real life” group work in the classroom can help students observe and appreciate the benefits of team cooperation.

One of greatest challenges in bringing JLS to North America is time and money. In Japan, lesson study is both sanctioned and supported by the Ministry of Education and its regional offices. In McDonald’s Canadian study on JLS, she claimed the “results of this study suggest the benefits outweigh the expenses” [13].

## 8. Documenting Reflection

A fourth ingredient for healthy effective professional development calls for teachers to be “reflective practitioners”. When groups of teachers document and revisit reflections whether written or in conversation, they can see irregular patterns emerge and become aware of the complex systems of teaching and learning. As individuals reflect on their learning and make meaning of it for themselves, their sharing in the group can improve both the individual and collective thinking.

In Japan, the JLS group records reflections on their learning throughout the process. These reflections become guides for teachers outside the group to understand the process the lesson went through and the responses students gave along the way. What is captured is a product that is informed from multiple sources such as many teachers who creating it, several classes experiencing it, and different students interacting with it.

The lesson produced is one artifact from the process. In Ontario, Targeted Implementation and Planning Supports (TIPS) have been around for years but have not been widely adopted by teachers. In Suurtamm and Graves’ research report on implementing Ontario curriculum by teachers used textbooks 80% of the time as a resource when planning math lesson and TIPS 2.0 only 34% of the time [16]. TIPS 2.0 was created to “specifically provide educators with a variety of teaching strategies that are supported by contemporary research in mathematics education” as described in the curriculum document. With clearly articulated goals for student learning, the TIPS lesson has ideas to activate prior knowledge, interesting engaging inquiry activities, and clear consolidation ideas. These lessons require teachers to teach in a constructivist mind set. It requires teachers to let students experiment and ask questions and discover mathematics. However, most teachers would not argue that the lessons look engaging even though they struggle with how to deliver them. According to Suurtamm and Graves, “In many cases, teachers,

themselves, have not learned mathematics in this way, nor have they had opportunities to learn and teach in inquiry-oriented settings”. With JLS, teachers can experiment with TIPS lessons, use the TIPS 2.0 structure to develop their lessons and use the colleagues in the classroom during delivery as a support to help keep students focused. JLS allows teachers to explore and try new methods of instruction to build instructional confidence.

In Japan, the JLS reports are often published and teachers are responsible for almost two-thirds of the research articles, thus producing more articles than researchers. American teachers in the US-Japan collaborative JLS “never found the time to discuss this learning or to produce a written report” [12]. Failing to document the practice meant the Americans did not adopt the research lens. Reflection is a critical component to research. Thus teachers in Ontario may need guidance on how to document their reflections on learning. Tools and templates could be developed to assist the documenting process. Since math teachers in Ontario are focused on EQAO data, documentation of successful lessons could be linked to student progress on EQAO tests. Teachers who develop specific lessons to target week skills identified by EQAO could include pre and post EQAO data to show the success of the lesson in addressing the skills.

## 9. Assessing Expectations

A fifth ingredient needed for a healthy community of learners is opportunity to assess expectations. An integral part of JLS is assessing whether the lesson is meeting its objective. Teachers observe the lesson to decide if it is received by students in the way it was intended. These observations form the basis for lesson revisions. Japanese teachers understand the importance of articulating for themselves, and others, exactly what they want to look for in the observation so it will be productive. Being clear on what to look for in the lesson is a challenging process as well as anticipating what student will be thinking and how they will respond. Lesson plans in Japan usually include anticipated student responses with both correct and incorrect responses; thinking about how students will respond is a main focus in JLS. In the New Jersey JLS, Fernandez described how the teachers often had large gaps in their content knowledge as well as in their understanding of how student would engage in a particular concept [9]. In Ontario, teachers may need training in how to anticipate student responses. Coaches could bring content knowledge as well as ask questions during the lesson development process to prompt teacher to think about possible student responses.

Teachers and students in Ontario are used to being observed by the Principal doing a teacher performance appraisal. Teacher and students may not have experienced groups of teachers observing in their classroom and may find it unsettling in the beginning. Time will need to be taken to explain to students why there are other teachers in their class observing and to build a climate where visitors are seen as the norm and not as the unfamiliar.

In Ontario, the Ministry of Education has asked teachers to do assessment *for* learning (before and during the learning cycle), *as* learning (supports metacognition and leads to self assessment) and *of* learning (summary of learning at a point in time). This requires teachers to be very clear on their expectations for a lesson and to have mechanisms in place to assess student understanding at all parts of the lesson process. Suurtamm and Graves state in their research that further work needs to be done on assessment in Ontario [16]. The attention given in JLS to clearly articulating the goals of the lesson, would help teachers to plan assessment for, as and of learning for their students.

## 10. Changing Cultures

A sixth ingredient for healthy and effective professional development involves members of the community thinking about how their practice can be changed by their collective efforts. Suurtamm and Graves, in talking about changing mathematics teaching, claim that the kinds of changes teachers are being asked to undertake in Ontario “are not simple and require a substantive re-orientation of their basic beliefs about the world in general, and mathematics education in particular”. Lesson Study has impact on the participants because it changes the way they learn and think about teaching. Darling-Hammond and McLaughlin, claim that “these systems of self or peer reflection, examining the effectiveness of teaching and student learning, enable teachers to change their view of effective models of practice, creating a process of transformational learning for teachers” [5]. It is important that students see mathematics as meaningful, useful, and doable. Teachers should take every opportunity during the teaching/learning process to help students develop a positive disposition towards mathematics. By focusing on the *Mathematical Processes*, outlined in the Ontario curriculum, teachers can empower students mathematically. Teaching mathematical processes requires teaching students to think like mathematicians using the principles of inquiry. If teachers do not use such inquiry in their practice, understand the purpose of mathematics, and use mathematical language, then how can they teach

students to be mathematical thinkers? Focusing on the *Mathematical Processes*, namely reasoning and proving, reflecting, connecting, and communicating in the math classroom, helps create students who are mathematics thinkers, who tackle tough problems and seek multiple solutions. JLS uses all these processes and helps to create teachers who think like researchers and ask tough questions about teaching and seek new strategies to address them.

Teachers can advance their discipline through JLS as Stigler and Hiebert explain in their claim that “Japan has succeeded in developing a system that not only develops teachers but also develops knowledge about teaching that is relevant to classrooms and sharable among members of the teaching profession” [11]. The goal in the Ontario curriculum is to move away from teacher-center instruction to student-centered instruction. Lessons are not about teachers covering content but are focused on student understanding. Lessons are designed to maximize student engagement and are created with multiple opportunities for students to demonstrate their understanding. In Japan, JLS has accomplished this same goal.

JLS puts teachers at the heart of instructional inquiry and the quest for improved teaching practice. Stigler and Hiebert observe that “The Japanese have created a national research-and-development system, based on teachers’ experiences, that ensures the gradual improvement of teaching over time” [11]. This method creates a sustainability of improved teaching practice. As more groups join in the practice of JLS they begin where others left off, building on the skills learned, using what was created and recorded to go to the next step. Teachers continually build on a previous JLS, advancing their practice one more step each time.

## 11. Conclusions

In secondary schools today, the Ontario Ministry of Education is focused on increasing the graduate rate by improving student learning. Research has shown that the single most effective strategy to improved student learning is improved teaching instruction. Professional development for teachers should be about improving teaching practice which leads to better instruction. It should not be about looking for what professional development to *give* to teachers but about looking for what professional learning experiences will bring teachers together and have structures in place to build a community, so teachers are guided to act in meaningful ways to inform their practice. Suurtamm and Graves found that math teachers in Ontario, want professional developments that teaches them about problem

solving, helps them to understand how students learn mathematics and focuses on new effective teaching strategies. As Takahashi and Yoshida note, JLS may indeed fit the bill [17]. They claim that,

Lesson Study provides the context for teachers to focus their discussion on planning, implementation, observation, and reflection on classroom practice. By looking at the actual classroom practice, teachers are able to develop a common understanding or image of what good teaching practice entails, which in turn helps students understand what they are learning.

Takahashi and Yoshida's description is the kind of professional learning experience that has the potential to impact teaching practice and lead to improved student learning.

JLS creates a structure that helps support teacher learners and helps teachers combine all the outside pressures of provincial mandates like differentiated instruction, and coaching to name a few, but it also complements the daily process of teaching curriculum with students. Teachers in JLS continually learn, construct knowledge and through their actions make learning visible. They develop a greater understanding of what students experience as learners and are able to expose their personal methods of making meaning and give students an inside view of metacognition. The most powerful justification for Lesson Study is that teachers are in control of their learning and advancing their professions as the teacher researcher and hence feel empowered and eager to explore. Teachers become reflective practitioners, document their practice and have the sustained conversations about teaching that are necessary to move them forward and to contribute to changing the culture of teaching. As noted in the expert panel report on Student Success in Ontario "If improvement in student achievement is to be continuous, teachers must have access to ongoing and comprehensive professional learning in mathematics and the best ways to teach mathematics" [1]. JLS provides a venue for ongoing learning and a place where coaches can promote new ways of teaching.

In Ontario, versions of JLS have been tried and found successful in some pre-service education programs and with literacy teachers. Adopting the Japanese model is not without challenges. Japan has a culture of teachers who over time have built a strong model of collaboration. Teachers in Japan take a learning stance and see their classrooms as places of learning for students and teachers. They work with a research lens, able to set and measure clear achievable goals. The Japan teachers have learned how to be strategic in observation. U.S. practitioners struggled with JLS and sometimes focused on the

teacher rather than on student learning; made impressionistic notes rather than thorough observational records; and engaged in discussions that emphasized debate rather than listening and reflection. Teachers in Ontario could just go through the motions and not truly implement all the elements of JLS. Watanbe states "lesson study is a shared professional culture not just a professional development activity" [18]. Teachers involved in JLS may need to be reminded the goal is to improve their learning and the key is to maximize their learning by building a learning community.

## 12. Future Work

The Ontario Ministry of Education is committed to developing practices that are evidence-based, research-informed, and connected to improved student learning. Evidence to date shows JLS to be an effective method of professional development that improves teacher knowledge and confidence which impacts student learning. More opportunities could be created for Ontario teachers to learn about and to be involved in JLS and to understand the power of informed research by fostering research collaboration between school boards and universities. School boards offer teacher professional development and are mandated to implement effective teaching strategies such as Differentiated Instruction. University researchers need access to classrooms and teachers to explore and test the effectiveness of different teaching strategies and have the experience and expertise in developing research questions. Working together to create teacher Lesson Study teams, led and supported by researchers, school boards and universities could achieve their goals together. Teachers would benefit from this union and opportunity for meaningful professional development that would be created. The Ministry of Education, through policies and programs could promote these partnerships and networks among researchers and educators.

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## **Session 14: ICT Education**

Learning Intercultural Communication in an Immersive Environment with Web 2.0 Tools  
(Wilfred Fong, Gordon Lee, Anthony B. Chan)

Exploring the Effectiveness of Online Learning Materials to Support the Mentoring of Trainee Teachers in Workplace Settings  
(John Davies, John Ryan)

Student Independent Performance of Statistical Computation Procedures after Practicing With and Without Conditions for Transfer of Stimulus Control  
(Diana Mîndrilă)

Using Lareau's "Concerted Cultivation" to Interpret Parenting Issues within a Canadian Aboriginal Community  
(Paul Betts)



# Learning Intercultural Communication in an Immersive Environment with Web 2.0 Tools

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## Abstract

*Web 2.0 has quickly changed how today's young people communicate and how they learn. In this paper, the authors review the use of Second Life along with YouTube and Facebook in teaching an undergraduate course in intercultural communication as part of a study aboard program. Students were socialized to the local culture through an immersive 3D experience via Second Life before departing to the country. Discussions on the use of the technology and the positive reflections of the students on this approach to learning are presented in this paper. Further reviews are also suggested for future offering of similar types of courses.*

## 1. Introduction

This paper is a case study on integrating *Second Life*, *YouTube*, and *Facebook* in an intercultural communication online course. The course was offered to undergraduate students at the University of Ontario Institute of Technology, Oshawa, Ontario, Canada during the summer of 2009. Twenty students enrolled in this course participating from various global locations including Toronto, Oshawa, Hong Kong and China. This course was part of a summer study abroad program in Hong Kong, founded by the authors, which included a travel component to the city of Hong Kong. For many students, this would be their first trip to Hong Kong, and the course was designed to help them learn about Chinese culture before arriving in Hong Kong. We also used this course to investigate the usefulness of learning cultural issues using multi-user virtual environment and Web 2.0. The results of the effectiveness of the course would obviously be measured by the students' experience in their trip.

*Second Life* is an online virtual world application that many people still view as a game or entertainment. Educators are now considering

virtual worlds, such as *Second Life*, as potential learning environments. Articles are now being published on the use of *Second Life* in education [3,6]. This multi-user virtual environment allows students to interact with each other and the instructor. Many of the initial *Second Life* sites were simple reproductions of a real physical environment. However, the best *Second Life* sites are those which take full advantage of its 3D capability, creating an experience which is difficult, if not impossible, to duplicate in the real world. An example is the teaching of a history class. Historical sites can be re-built in a virtual world that provides students with an experience that cannot be duplicated in a traditional classroom. Many universities have already started offering courses using *Second Life*. Since 2005, the University of Kansas Medical Center has used *Second Life* to teach students patient strategies associated with social aspects of being a doctor while Harvard Extension School offered a class on "Cyber One: Law in the Court of Public Opinion" in *Second Life* [9]. The University of Maryland/Baltimore College of Dental Surgery uses *Second Life* as medium for total virtual patient simulation to help improve dentist and patient relationships [8]. Through its Transforming Undergraduate Education Program, the University of Texas System uses *Second Life* as a creative and innovative approach in undergraduate instruction to create 49+ island education archipelago [10]. Penn State University also builds a "World Campus" on *Second Life* to provide their online students with academic advising [7]. Several universities and colleges in Canada have already adapted the use of *Second Life* in teaching their courses. A virtual campus has also been developed by the Mathematics and Informatics Department at the University of Salerno (DMI), Italy to support synchronous and collaborative learning for the students [5]. These are just a few examples of how *Second Life* is being used as an e-learning platform in higher education.

## 2. Design Course

Our study is a course designed to teach students intercultural communication using *Second Life*. The *Second Life* activities were augmented by incorporating Web 2.0 tools, *YouTube* and *Facebook*, enhancing the learning experience of the students.

Since this was a course focusing on Chinese culture and communications, the *Second Life* site was built with a Chinese theme (see Figure 1). There were 12 virtual classrooms on the site, representing each of the 12 weekly topics in a traditional lecture style course. In each of these areas, students would listen and view prerecorded materials created and delivered by the instructors. They would also have an opportunity for collaborative learning by watching each others' prepared presentations on the topic. The real world equivalent would be to stand up in front of the class to deliver a 3-minute presentation on a selected topic. Students could log into the classroom at any time to watch the lectures. Additionally, office hours were set up by the instructor at specific times so that students could interact directly in real time to discuss course topics. Using microphones and the *Second Life* Voice chat feature, it was possible to engage in a lively audio conversation similar to a conference call.



Figure 1. A screen of the course in *Second Life*

The success of an online course is dependent on good content and efficient student collaboration. Today's students already know how to access content on *YouTube* and sign onto *Facebook* routinely in order to catch up with friends and classmates. The key decision in running this course was to utilize the tools that the students already use on a daily basis, instead of making them log into an e-learning system such as WebCT, which was only used for coursework.

*Facebook* groups are online social communities where members post topics, respond

to each others' postings, and scan the wide range of discussions. Many students in the class were already using *Facebook* for discussion and collaboration. They typically monitor several *Facebook* groups, each representing the various facets of their busy school and personal lives. For this course, we created a specific *Facebook* group, dedicated to discussion on this class. Students participated in this group just as they would any other, collaborating with fellow classmates and the instructors.

## 3. Findings

The collaborative learning enabled by *Facebook*, *YouTube* and *Second Life* encouraged students to review what others had created. One of the students observed that by watching other videos and reading their summaries, the student was able to compare and contrast findings with those of other classmates to gain further insight into the assigned topics. They not only learned about different perspectives of various topics from each other, but also got to know more about the effective use of technology. Although most students had viewed online videos from *YouTube*, this was the first time for several to post their creations onto *YouTube*. One student commented how he overcame shyness in front of a webcam while he prepared his video recording. He found that the experience prepared him for the future in his career.

A common complaint from several students was the overhead involved in order to use *Second Life*. They had to first download and install the *Second Life* software. After that, they had to create an avatar. The learning curve was steep in the beginning, especially in learning how to control the movement of the avatar in *Second Life*. When we organized an in-class face to face tutorial to help students overcome the growing pains of using *Second Life*, we encountered a technical limitation due to *Second Life* blocking of multiple creations of avatars from the same IP address. Although there were numerous start up problems similar to this, students were accommodating as they understood the difficulties of being on the leading edge of technology.

Although *Second Life* is an excellent environment for experimental learning, it requires the skills of a sophisticated computer programmer or gaming student to make events happen. The students and instructors were neither proficient at *Second Life* scripting nor was it desirable for them to embark on a long learning curve to master this skill. It was necessary to find a vehicle which

allowed for easy content creation without the overhead of *Second Life* scripting. Students and instructors record their content into *YouTube*, and to integrate the *YouTube* video playback into the *Second Life* virtual classroom (see Figure 2).



**Figure 2. Shows the integration of *YouTube* lecture video into the *Second Life* classroom conducted by one of the instructors**

Although some students had concerns of privacy by posting their videos of themselves on a public site such as *YouTube*, they were able to devise creative methods in making their video presentations. Some of them put up slides of their lectures while others did animations about their topics or put their voices behind inanimate objects.

The other issue that we explored is the use of *Facebook*. How is this social media different from some of the existing course management systems such as Blackboard and WebCT? Based on the evaluations from the students, many of them already had a *Facebook* account and were familiar with the system. As they were already checking on the site every day, it was a convenient way for them to keep themselves up-to-date with the postings on the course site on *Facebook*. One student even commented that they visited the *Facebook* group more frequently than going to the university course site. They could post and share their feedback on *Facebook* as well as communicating with the instructor and fellow students after seeing the instructor video lectures on *Second Life*. Access to the *Facebook* group was limited to students and invited “friends” only.

Students also found that learning in a virtual environment was convenient as they could go to the site at any time of the day (or night). They could learn at their own pace or meet virtually in *Second Life* with other students to discuss their projects, despite the remote distances between them. In addition, the students could explore different areas in *Second Life*. This allowed them a much larger scope of learning in a virtual environment. A comment from a student summarized the experience, “Creating an avatar

served to make the experience seem ‘real.’ In contrast, WebCT was not this interactive, allowing *Second Life* to better capture the essence of class. The use of *YouTube* to broadcast ourselves was a different approach. I liked the fact that we could make videos to mimic the classroom comments we may have made if we sat through a lecture on each topic.”

The outcome of the course was that students learned about communication techniques in the Chinese culture that prepared them for the Hong Kong adventure. The students found the course very helpful in socialization for a foreign culture especially as it was even the first time for many of them to travel overseas. The *Second Life* environment not only helped them learn about Hong Kong from each other, it helped improve their presentation and communication skills as well as technology knowledge.

#### **4. Results**

*Second Life* is not a course management system (CMS), although it has the potential to become one. It lacks of some common features as found in many CMS such as assignment submission drop box, grade books, etc. These features may require additional programming. But once done, *Second Life* could become a comprehensive one-for-all e-learning platform.

For many students, their first impression of *Second Life* is an online game. It is more than a game. A game has rules for the players to follow but there are no rules in *Second Life* [4,9]. Instructors and students can create and build their own “world/classroom.” With more experienced students, a course can be enhanced if they are able to develop their own applications within *Second Life*. For example, students can participate in role-play scenarios to better understand the concepts [2].

#### **5. Conclusions**

Teaching in an e-learning environment still requires the understanding of individual learners of their needs, cultural background, learning ability, and personality [1]. It continues to be a challenge for instructors to know their students better without the real physical contact. We created a comfort zone by using *YouTube* and *Facebook*. Today’s students are comfortable with the Web 2.0 technology and are more willing to express themselves in that environment. This helps foster and strengthen the relationship between the instructor and the students in a virtual world. The

biggest challenge is convincing instructors to embrace Web 2.0, as their initial tendency is to be wary of technology.

It would also be useful if we had had the opportunity to study the interaction among the student avatars vs. the interaction among the students in a physical class [4]. This will require the set up of a control group. However, based on the students' comments, they interacted well within *Second Life* because they had already grown accustomed to communicating with each other via messaging systems or *Facebook*.

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# Exploring the Effectiveness of Online Learning Materials to Support the Mentoring of Trainee Teachers in Workplace Settings

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## Abstract

*Currently trainee teachers in the United Kingdom following a one-year Post-Graduate Certificate in Education (PGCE) spend approximately two thirds of their training year in a workplace setting, typically a school or a college, and one third at their university or higher education institution (HEI). Much of the training is therefore delivered in the workplace and the university is responsible for the quality assurance of this training provision, and for the programme development and enhancement overall. Where there are concerns about the work based provision, for example, a significant gap in the professional training needs of trainees, then the university has to action plan for improvement. One such significant gap, identified through trainee feedback, was knowledge and skills to engage effectively in multi-agency working. One possible solution to addressing this gap was developing online learning materials to enable trainee teachers and their work based mentors to address this issue. Our research, and the content of the conference paper, explores how effective online materials can be used to support work based learning and professional practice. We are particularly interested in how online materials can support work based mentors and the mentoring practices and processes that happen in the workplace. How the mentoring process aligns with Vygotsky's [1] suggestion of a 'zone of proximal development' will be explored in the context of work based learning and online/elearning approaches.*

## 1. Introduction

The background to this research stems from a significant change in the context and delivery pattern of initial teacher education in England over two decades. Since the early 1990's there has been an on-going process of change in the relationship between HEIs and schools. Furlong et al [2] referred to the emergence of three types of partnership: 'HEI-led', 'Collaborative' and 'Separatist', with each reflecting a

very different approach to joint activities in the context of partnership-based initial teacher training. Given that the key responses to the policy changes introduced in the early 1990s were that the schools had taken on a much more active role in Initial Teacher Education the Department for Education and Employment (DfEE), in December 1999, invited schools to bid to become Training Schools and, as such, to seek new innovative ways of improving the quality of Initial Teacher Training. The first two phases of the Government's training school programme were launched in 2000 and 2001 respectively and eighty two schools were given training school status and were provided with extra funding by the DfEE to develop and disseminate good practice in ITT and to train teachers to mentor trainees. In its evaluation of the training schools programme, Ofsted's [3] main focus was the success of the training schools in increasing the number of trainees in the school and the improvements in the quality of mentoring of those trainees. Other benefits identified included enhanced opportunities for on-going professional development of training school staff and the adoption of a more reflective and analytical approach to teaching. In other words, to a large extent the initial benefits had been internal to the training school.

## 2. Literature Review

Through the course of our research we have identified three distinct fields; multi-agency working, mentoring and the pedagogy and practice of online learning. Awareness of the challenges of collaborative multi-agency working is important if those working in children's services, including teachers and trainee teachers, are to successfully co-operate and collaborate in working with vulnerable children and young people.

The ability to share information across agencies has been an area of particular concern in recent years with several high profile cases reported in the UK that illustrate mis-management of vulnerable children as a result of a lack of information sharing and collaboration across agencies. On a more practical

level, trainees should know that there can be very different professional language used and protocols adopted within the different agencies. It is also important for trainees to be aware of the different priorities that each agency working with children and young people may have, and that there may be a lack of clarity of the roles and responsibilities within the different services. Another complicating factor is that each agency will have separate funding and budgets and which can cause difficulties in collaborating, for example, with the allocation of time and the provision of staff. Finally, trainees need to be aware of the opportunities and challenges of engagement with parents/carers.

However, we have found that the complexity of working across different professions has been well researched, with many models and approaches explored over the last two decades, for example, 'activity theory' and 'knotworking' Engeström [6] 'communities of practices' Lathlean, J. and le May, A. [7] and 'situated learning' Lave J. and Wenger, E. [8]. Similarly the challenges of multi-agency working became the focus of much research in the early part of this decade; see for example, Farmakopoulou [9], Granville and Langton [10], Milbourne [11] and Tomlinson [12]. This research provided a useful framework when considering the challenges for trainee teachers engaging with multi-agency working, but further discussion is beyond the scope of this paper.

The choice of mentor and the training for the role are clearly very important to achieving desirable outcomes. It is, therefore concerning to read Tedder and Lawy [13] describing that 'there remains a lack of clarity within the sector about what mentoring should mean' in their research into mentoring practice in initial teacher education in further education. The model for trainee teachers in further education outlined by Tedder and Lawy [14] where "a mentor is allocated to a trainee to advise on general skills on 'the pedagogy of the classroom' and on subject issues" mirrors what happens in schools and other institutions. The focus on 'classroom pedagogy' and 'subject issues' is perhaps not surprising following a recommendation by Her Majesty's Inspectors (HMI) in 2003 that HEIs 'ensure the provision of workplace mentoring to support trainees in developing the necessary skills to teach their specialist subjects' [15]. Issues beyond the classroom, such as, multi-agency working may have slipped down the list of priorities as a result of this recommendation, this is an issue we will return to later in this paper after we have explored the choice of mentor and the mentoring role.

The 'allocation' of mentors must ensure that they are appropriately motivated and trained, and capable of building effectively personal and professional working relationships with their mentees. Colley [16]

outlines the importance of the mentor – mentee relationship highlighting the complexity of the relationship as the needs of a third party, in this case the university, is taken into account. A complicating factor here is an increased emphasis on grading trainees against standards and characteristics, a requirement of agencies, such as, the Teacher Development agency (TDA), Lifelong Learning UK (LLUK) and Ofsted for institutions delivering teacher training programmes. As a result, Cullimore and Simmons [17] point to a tension in the mentoring process as mentors are required to spend more time assessing and grading trainees leaving less time, potentially, to support, guide and action plan trainees' professional development. This may not be a direction that some in the profession would wish to see the mentoring role heading in, but it might help to clarify the role which many have felt lacked a clear direction. Rice [18] for example, pointed out that despite the fact that 'the mentoring of student teachers in England and Wales started over 15 years ago literature suggests that the roles and responsibilities of the mentor are still poorly defined'.

Although the role of the school based mentor in initial teacher training has been developing for nearly twenty years now, it continues to prove difficult to clearly define the nature and extent of the role. Rice [19] traces this problem right back to 1992 when the school based mentoring role was effectively put into place within the DES Circular 09/92. Rice points out that the term 'mentor' does not appear in this Circular, perhaps implying that a lack of clarity of the mentoring role may have stemmed from this and indeed carries on to today. There is evidence that the mentoring role is being researched and that more detailed guidance is being offered within the profession. For example, the Teacher Training Resource Base (TTRB), an online resource available to all involved in initial teacher training, is one of the organisations that provide general guidance on mentoring and research covering a range of issues, such as, pedagogical practice for mentors; familiarising mentors with adult learning theory; reflective practice; communities of practice and models of workplace learning, such as, the apprenticeship model. There is also a comprehensive literature on, for example, who makes a good mentor; defining the mentoring role and effective mentoring practice available from general management training materials, and guidance on mentoring in other related professional fields that can be drawn upon to inform mentoring in Initial teacher training. Some of the issues raised in this literature are discussed in the findings below.

It is challenging to provide school based mentors, with appropriate Continuing Professional

Development opportunities to up-skill them to deliver effective training in all areas. New and different ways of addressing this problem has led many within the education community to consider eLearning as an appropriate methodology. In the case of University sector in general there has been a drive towards more flexible modes of learning, with eLearning being a desirable option with students recruited to programmes from very diverse geographical locations. Turney [20] drawing upon the work of Connolly [21] and Sharpe [22], concludes that 'Technology is increasingly being exploited for learning and teaching in universities around the world'. Although for trainee teachers' University attendance is normally a requirement with eLearning used to support this work, with much of the trainees' time spend away from the university in schools eLearning offers a real opportunity to support their training at a distance.

To provide flexibility in the training programme it was decided that these materials should be web based so that they could be made available to school based mentors to support their work with trainees to supplement anything that was done at the university. Turney [23] points out that technology is used largely because it is considered to offer greater flexibility in relation to time, place, pace, entry and exit. However, flexibility is only one consideration in choosing to use online materials within a training programme, there are many other things to take into account such as, the efficacy of technology in engaging learners/trainees, perhaps linked to trainees preferred learning styles, their access and use of ICT and the competing demands on their time.

Using online material to support work place learning would appear to be a pragmatic and relatively unproblematic way of delivering certain course content. It certainly provides the potential for access and learning opportunities for students' off-campus as outlined by Biggs [24], and it may also enable the programme delivery to engage in a more 'blended' approach to learning Sharpe [25]. It is, however, likely to create fewer difficulties than might be the case with other eLearning approaches and activities involving online teaching, and direct communication to provide guidance and support, see, for example, the eight different modes of eLearning delivery outlined by Harris [26]. However, Seol [27], in discussing the transactional distance between the e-teacher and eLearners, highlights concerns about highly structured programmes that have low levels of dialogue between the instructor and learners, and these concerns might equally be applied to the provision online materials that are left for the learner to interpret.

Where there is appropriate mentor-trainee engagement with online supporting stimulus material it is likely that positive learner development will take

place. Constructivist learning theories and in particular Vygotsky [28] theory of a zone of proximal development appear to be clearly reflected in this mentoring relationship. We therefore felt that in providing access to online materials we might be able to provide a framework, or a 'scaffold', for individual learner development to take place as Turney [29] suggests:

*Despite this, the ability of students to use technology to repeatedly return to resources was a clear benefit. The constant availability of resources allowed students to take responsibility for their own study at a pace appropriate for the learner. (p81)*

In considering the use of online materials as a 'scaffold' it is also possible to identify some direct links to the comprehensive literature on learning styles (Entwistle [30]; Gardner [31]; Honey and Mumford [32] [33]; and Silver [34] as online materials can provide opportunities for individuals to learn beyond the 'taught' classroom, on their own and/or in collaboration with peers and mentors. However, learning styles is not an uncontested area, Coffield [35], for example, highlights a number of issues about the authenticity and significance of learning styles within the learning process, a caution to bear in mind when promoting the use of online materials to support preferred learning styles in the workplace.

Other concerns have also been raised about the significance of ICT in supporting and enhancing learning, in particular the context(s) in which supporting evidence has been gathered (see for example, Convery [36], Somekh [37], Reynolds [38] and Selwyn [39]. Convery [40] raises concerns about the 'cultural context in which educational technology research is commissioned'. He describes how in countries such as, the UK, the USA and Australia government technology agencies stress the importance of the use of technology in education from the perspective of skills development for the future workforce.

If this is the case, finding from research and development work carried out by government agencies, such as Becta in the UK, would need to be carefully scrutinised for their impact on learning and teaching, in addition to any skills development that has taken place. Convery *ibid* states that government agencies stress 'the importance of developing technological skills for securing national economic competitive advantage', with presumably less emphasis within their research on more complex questions about the significance of technology in cognitive development and the learning process.

Somekh [41] highlights a lack of impact resulting from enormous amounts of money spent by the UK

Government on information technology initiatives within the field of education throughout the 1980's and 1990's and into the 21<sup>st</sup> Century. The lack of engagement with technology of many working within the education profession over such a long period is interesting, and it may, however, have more to do with the robustness of the technology available at that time than any particular pedagogical concerns. There is no doubt that as technology has advanced in recent years with, for example, Interactive Whiteboards and Internet use now evident in many learning situations, the significance of technology is not be ignored.

The area of technology research may develop as a consequence of more active engagement with technology in learning and teaching at the present time, but Convery [42] suggests that there remains a lack of critical debate within this area. Drawing upon Somekh's experiences within the field of educational technology research over two decades, he highlights how, for example, at conferences ICT researchers can find themselves annexed off as a sub-group, left to present their research findings within 'something of a closed shop'.

### 3. Analysis of Finding

The UK Newly Qualified Teacher (NQT) survey 2007/08 showed that knowledge and understanding of multi-agency working was rated by 32% of trainees nationally as 'very good or good', indicating that 68% did not feel that they were sufficiently prepared. Our research with trainees nearing the end of their one year Postgraduate programme of training also revealed a serious lack of awareness of multi-agency practice – and significant ignorance about multi-professional practice when working with pupils experiencing special educational needs and/or vulnerability.

For Example, when asked what they understood by the term and concept of 'multi-professional working', some of the responses received included: working with the wider school - outside your subject specialism; the ability to work within a number of subject areas, working academically and pastorally; I think in the case of a teacher it would mean they take the role of teacher/social worker; as a guess, different professionals working together. Others stated that they had absolutely no idea of this meant and had not heard the term used whilst on work-based placements.

Our research with trainees also highlighted concerns relating to wider issues around a workplace training model and draws attention to the 'lottery' that reflects the reality of workplace learning for trainee teachers. Within this, much depends on the school a trainee happens to be placed in and the mentor's enthusiasm, experience and knowledge for certain

parts of the curriculum. As the mentoring process was taking place away from the university, in a workplace setting, it was also important for us to understand the nature of workplace learning. The National Workplace Learning Network highlight a range of workplace learning opportunities, such as, on-the-job, experiential learning, informal learning, coaching and mentoring. In exploring their potential for engaging trainee teachers in developing knowledge and understanding of multi-agency working involving vulnerable pupils we identified the mentoring process as having the greatest potential from the above list of workplace learning opportunities. However, we remained concerned about the following two issues, raised by Tedder and Lawy [43] in the literature review above; a lack of clarity about the mentoring role, that could be compounded by a lack of responsibility for developing work beyond the classroom and/or related to their subject teaching. In this context we started to explore how we might support the mentoring process that was necessary to enable trainees to engage with non-subject specific and/or classroom teaching focused, multi-agency working. Through trial and error we moved from liner worksheet based material, to more interactive Powerpoint based material presented on a CD, to exploring the use of online learning material produced by us for a specific purpose.

One of our findings, at the desk research stage of the project, was that there was already such an enormous amount of information on multi-agency working available online that it was potentially confusing and certainly very time consuming to engage with, particularly for trainees and mentors with many other priorities. Information providers included government agencies, such as, the Department for Children Schools and Families (DCSF), who in setting out their Every Child Matters agenda provided comprehensive coverage of multi-agency working. In addition to this central information each of the sectors involved in providing aspects of the children's services provided their own support materials to provide advice and guidance and outline specific roles and responsibilities. As discussed in the literature review above, we also found that there were problems associated with the range of literature available, for example, different professional language used and the protocols adopted within the different agencies. There was, therefore, the potential for trainees and mentors engaging with this material to become confused by the terminology and professional practices of the different agencies. We also found that even the Every Child Matters website, which was a significant resource for integrating the practices of children's services in the UK, was not easy to navigate.



Our concerns about the material that was already available online clearly presented us with a challenge in developing our own support material. The material would need to be in a form that would engage trainees and that could be readily up-dated in response to the changing policy and practice contexts. The benefits of producing the material online meant that trainees and their mentors could access the materials at any time and work with them at a pace that best suited their needs. We were conscious of the fact that the materials needed to be presented in a format that enabled both trainees and mentors to work with them irrespective of their preferred learning styles. Making the materials as interactive as possible was also a priority as we became aware that trainee's needs were very much based on a 'needs to know basis' i.e. they would engage more effectively when their learning had a direct relevance to their work.

#### 4. Contribution to Knowledge

One significant issue to arise from our research was the identification of areas of work, such as, multi-agency working, where it can be very difficult to engage trainee teachers in 'real work' situations. This is partly related to the confidential nature of the work, but also that observing practice, first hand, is not possible or very appropriate. In exploring alternatives we identified the mentoring process as the best opportunity to support and engage trainees in multi-agency working. However, it became clear that mentors themselves may lack expertise in this area of work and that mentors and trainees would benefit from support materials, providing those materials addressed particular issues. They would need to be easily accessible, flexible and interactive, regularly modified and updated in response to constantly changing political and social agendas. Developing appropriately focused online materials appears to be one solution and this is what we are currently exploring. There are technical and pragmatic challenges in doing this effectively, and there are pedagogical questions that require further examination.

#### 5. Conclusion and Future Work

Like a lot of research activity we have found ourselves on a journey that has taken us far from the straight and narrow. What at first seemed like a relatively straight-forward problem, to plug an identified gap in the knowledge and understanding of trainee teachers turned into an multi level exploration of workplace contexts, personal relationships, pedagogical principles and learning materials. We feel that we are still only at the exploration stage of

evaluating the potential for online material to support effective learning in a workplace context via a mentoring relationship. Our expertise is not in the field of ICT and although this brings certain challenges it may also bring new insights as a touch of a cynicism can sometimes enable more critical reflection.

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# Student Independent Performance of Statistical Computation Procedures after Practicing With and Without Conditions for Transfer of Stimulus Control

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## Abstract

*The current study aims to determine whether the usage of a gradually summarized procedural sheet (GSPS) while practicing newly acquired statistical skills improves the acquisition and independent application of these skills in new contexts. Two adult, normally developed individuals received instruction on how to conduct a Chi-Square test and how to compute the Kappa reliability index. An alternating treatment single case research design was used to compare the effectiveness of practicing one of the skills using the GSPS, while the other skill was practiced using the notes from the instructional session. Practicing sessions were followed by four opportunities to independently apply each skill, in which participants did not receive any external support. For both subjects, using the GSPS increased the level of performance during practicing sessions, as well as during the independent application of the newly acquired skill. Additionally, practicing with the GSPS led to a different acquisition pattern. The GSPS facilitated the transfer of stimulus control (TSC) from written prompts to internal stimuli. Therefore, for the two participants, further practicing sessions should be based on similar techniques, which facilitate TSC to internal stimuli and increase the probability of correct application when external support is not available.*

## 1. Introduction

An essential aspect of effective instruction is providing conditions for transfer of stimulus control (TSC). Often, the teacher models a particular behavior and induces the student to imitate it.

However, inducing the response is only the first step. The student's response must come under the control of internal variables [3]. This process can occur a) when the behavior becomes reinforcing in its own right, or b) when it comes under the control of internal stimuli. For instance, the discriminative stimulus for writing may initially be a blank page or an unfinished paragraph. In this initial stage the writing activity may be halting and awkward, but with practice writing is prompted by internal stimuli, such as thinking of new examples or of good points to be made. Furthermore, during the process of writing finding the most adequate words or phrases to express ideas becomes reinforcing. A similar situation is the association of pictures with words the child is learning to read. Initially, the picture is the stimulus that controls the student's response. For instance, a picture of a flag induces the student to respond "flag" to the four-letter word. Then the picture must be gradually withdrawn so that the word alone has control over the students' response [1].

The failure to provide for TSC is one of the major errors found in microcomputer instruction [7]. For example, a program that consistently highlights words that students are to type teaches them to copy the highlighted text, rather than to think about the content presented on the screen.

## 2. Theoretical Framework

Several methods were used to investigate TSC. Analytical studies tried to identify the conditions under which this transfer occurs and on demonstrating procedures to induce TSC for different subjects. For instance, in the single case research conducted by Touchette [6], three

severely retarded boys were first taught to correctly discriminate between a red and a white plastic key and to push only the red one. After the subjects correctly discriminated the two keys, black figures were superimposed on the red and white keys, and the onset of the red stimulus was delayed by 0.5 seconds. The delay procedure was used to identify the point at which the control of the response is transferred from one set of stimuli to another. This transfer occurred when subjects began to respond to the superimposed figure, before the onset of the red stimulus. The study showed that for the participating subjects this procedure was effective in transferring control from one stimulus to another, and that the transfer required fewer trials in successive reversals.

Another example of an analytical approach is the study conducted by Tiger and Hanley [5]. The authors aimed to identify the relevant histories of reinforcements or present contingencies that result in discriminated responding in the absence of overt schedule correlated stimuli. Furthermore, the authors tried to eliminate artificial stimuli by transferring the stimulus control to events in the natural environment. The two participants were selected because they requested teacher attention frequently and at inappropriate times. The researchers simulated instructional activities, in which they provided either reinforcement for one student and extinction for the other, or extinction for both students. In the first stage, these three types of responses alternated based on a time schedule, and changes from one type of response to another were not signaled to students. In the second stage of the experiment, researchers signaled the response to the target behavior by wearing blue, red, or white lei. In the third stage researchers continued to use the lei but also explained the students their significance before wearing them. In the fourth stage of the experiment the initial, non-sigaled schedule was applied again to determine whether the stimulus control has transferred from the lei to the response provided by the researcher when students solicit attention. Finally, in the fifth stage, reinforcement was arranged into six separate schedules, to make sure that the discriminative properties of previous reinforcement are disrupted before replication. Although the study has certain limitations, results showed that the simple presence of the lei did not indicate students which behavior is being reinforced. However, when wearing the lei is preceded by verbal explanations, students discriminate better between reinforcement and extinction conditions.

Furthermore, the discrimination was maintained when the lei was withdrawn, thus providing evidence that the stimulus control transferred from the lei to the researcher's discriminative response.

Such analytical approaches to the TSC help understand the conditions under which this transfer occurs and provide examples of effective procedures. However, this type of study has little social validity, and does not bring major improvements in the participants' quality of life or independent functioning. In contrast, applied studies on TSC generally focus on transferring behaviors from the control of one discriminative stimulus to another in order to help the participants function in conditions that are closer to real life, to improve their functionality and independence.

For instance, in the research conducted by Striefel, Bryan and Aikins [4], a TSC procedure was used to teach three profoundly retarded adolescents a series of specific responses to specific verbal instructions. When students began to respond to imitations of the target behavior, verbal instructions were provided before the behavior was modeled. Correct responses were followed by a delay between verbal instructions and the modeling of behavior. The delays increased from trial to trial, and TSC was indicated when subjects responded correctly on five consecutive trials before the behavior was modeled.

In summary, recent research on TSC is generally focused on identifying conditions and schedules of reinforcement under which it occurs, and is typically focused on individuals with special needs. The current study approaches the topic of TSC from a Skinnerian perspective, and applies it to general education. Specifically, the purpose of the study is to determine whether, for the subjects investigated, providing conditions for TSC while practicing the skills to be learned facilitates the acquisition of these skills and their independent application in new contexts.

### 3. Data Sources

*Participants and Settings.* The two participants, Dan (31 years old) and Sarah (28 years old) are graduate students enrolled in a Health Education Program. They are normally developed adults who do not have any prior knowledge of the statistical procedures to be learned, but were interested in acquiring these skills. Both participants have the essential prerequisite skills required of computing

percentages, and data categorization. These participants were selected because they share the typical characteristics of students who enroll in introductory statistical courses. Both of them work as graduate research assistants, and each session was conducted in their office, in the absence of other graduate students and after working hours. Therefore, participants received instruction and performed their tasks in a familiar setting and in the absence of other distractions.

*Recording System and Interobserver Agreement.* Both participants received instruction on two statistical skills: computing the Kappa index of reliability, and conducting a Chi-square significance test. These two skills were chosen because they require a similar number of logical steps, have a similar level of difficulty, require the same prerequisite skills, but have a completely different significance and the acquisition of one does not impact the performance of the other.

After receiving instruction, participants had four opportunities to practice, and four opportunities to independently apply the skills learned. The task analysis of both skills resulted in a sequence of ten logical steps that are need for their successful completion. These lists of ten steps were used as recording data sheets for data collection, as well as to compute the interobserver agreement.

All participant responses were provided in writing, and were rated by two independent raters who were blind to the purpose of the study. The raters did not have contact with the participants, and rated their performance by comparing their written work to the task analysis of each skill. Each step was rated on a three-point scale (0- not completed, 1 – partially completed, 2 – correctly completed). The interobserver agreement was recorded in three out of four (75%) of both the practicing and the independent application sessions. For Dan, the average Kappa index was 92% and ranged between 90% and 95%, whereas for Sarah the average Kappa index was 96%, with a minimum of 92% and a maximum of 99%.

*Procedure.* This study is a single case research and has an alternating treatment design, because it compares the effects two different practicing conditions on each participating subject [2]. The procedure was divided into five discrete steps (Table 1). Both participants received a pretest to determine the extent of their prior knowledge about the two topics introduced to them. Because both subjects had no prior knowledge, the research project continued by providing instruction on both topics.

The instructor is a graduate student in Statistics and was blind to the purpose of the study. She was provided with written instructional steps and examples for both skills, and was instructed to follow the identical procedure for both skills and for both subjects.

**Table 1. Research Procedure**

1. Pretest
2. Equivalent Instruction
3. Four practice sessions with reinforcement
<u>4. Four independent application opportunities</u>

After receiving instruction, both participants were given four opportunities to practice each one of the skills learned. On each occasion, subjects received a written assignment, which required the application of the skills learned in a concrete context. However, practicing conditions varied from one skill to another. For problems that required the computation of the Kappa Index, Dan was allowed to refer to his notes from the instruction session. This strategy was implemented to simulate real-life situations, when students in introductory statistical courses receive instruction in class, take notes, and then refer freely to their notes while practicing at home.

In contrast, the practicing sessions that required conducting a Chi-square test Dan was not allowed to refer to his notes, but was provided with a procedural sheet that gradually summarized the steps (GSPS) needed for task completion. This strategy aimed to provide conditions for TSC from external stimuli (written prompts) to internal stimuli, and increase the subjects' ability to independently apply this skill in different context. Thus, at the beginning, the subject receives detailed directions, which indicate the computational procedure that should be applied, and specifies in great detail all the actions that need to be taken, as well as the formulae needed for computation. To facilitate the TSC, in subsequent trials directions become gradually less explicit, steps are grouped in increasingly generalized logical sequences, and formulae are not provided. This strategy aims not only to help the subject memorize the procedures and formulae, but also to help him understand how the steps are related, and what are the major components of the solving procedure.

To ensure that differences in results are not due to the potential differences in the difficulty level of the two skills, Sarah practiced the Chi-Square significance test in typical conditions, and the Kappa index computation procedure with the GSPS. Additionally, to avoid the effects of fatigue and treatment carryover from one skill to another, the order in which the two skills were assessed alternated between sessions.

In summary, the independent variable is represented by the conditions provided during the four opportunities to practice, whereas the dependent variable is given by the percentage of steps completed correctly at each session. From an operant conditioning perspective, the discriminative stimulus is represented by the written prompts, the response behavior is the participants' written answer, and the reinforcement is the accumulation of points for each correctly completed step (after each session, participants were informed on the total number of points accumulated). During this process, the external discriminative stimuli were gradually faded for one of the skills learned, aiming to transfer the control of the response to internal stimuli.

Practicing sessions were followed by four opportunities to independently apply of the skills learned. For both topics, participants received a written a description of a real-life context in which one of the two skills could be applied, but did not receive any external prompts and did not have access of their notes. The purpose of this section of the study was to replicate a test or a real life situation, in which individuals have to decide which of the skills learned can produce the expected outcome and have to implement them independently, without support. Based on the assumption that the instruction provided is sufficiently similar across subjects and skills, the independent application section allows researchers to determine which practicing conditions were more effective for transferring the stimulus control from external to internal stimuli.

#### 4. Results

Data obtained from the pretest, practice sessions, and independent sessions are shown in Figure 1. Results from the pretest showed that participants had no prior knowledge on either one of the two topics. However, after receiving instruction, their performance increased gradually.

Dan practiced the Chi-square test with the summarized procedural sheet, and completed all steps correctly in the first, second and fourth session, and 85% of steps in the third sessions. Similarly, during the independent application sessions, Dan maintained perfect scores for the first, third and fourth sessions, and completed 95% of the steps correctly on the second session.

However, when practicing the computation of the Kappa coefficient using his notes, Dan completed 75% and 85% of the steps correctly in the first and second session respectively, and 90% of the steps in the last two sessions. When required to independently apply this skill, Dan completed 90% of the steps correctly on all sessions except for the third, when he completed 85% of the steps.

Sarah practiced the Kappa index computation procedure with a GSPS, and completed 70% of the steps correctly in the first session, 60% in the second session, 85% in the third session, and 90% in the fourth session. When requested to apply this skill without any external support, Sarah maintained a 90% performance on all sessions except for the third one, when her performance slightly dropped to 85%.

When practicing the Chi-square test using her notes, Sarah completed only 50% of the steps correctly in the first session, 70% of the steps in the second and third sessions, and 80% in the fourth session. During the independent application section of the study Sarah maintained the same score of 80% in all sessions except for the first one, when she completed 75% of the steps.

#### 5. Conclusion

The purpose of the study was to determine whether, for the subjects investigated, providing conditions for TSC while practicing the skills to be learned facilitates the acquisition of these skills as well as their independent application in new contexts. Visual analysis of the data indicates that although Dan's performance is overall higher than Sarah's, the acquisition and maintenance data patterns are similar between the two subjects. Results show that for both Dan and Sarah, practicing with the GSPS increase the level at which the skills are acquired. Additionally, the acquisition pattern seems to differ between the two practicing conditions. When only notes are used, the acquisition rate is more typical – the initial performance is lower and then increases gradually.

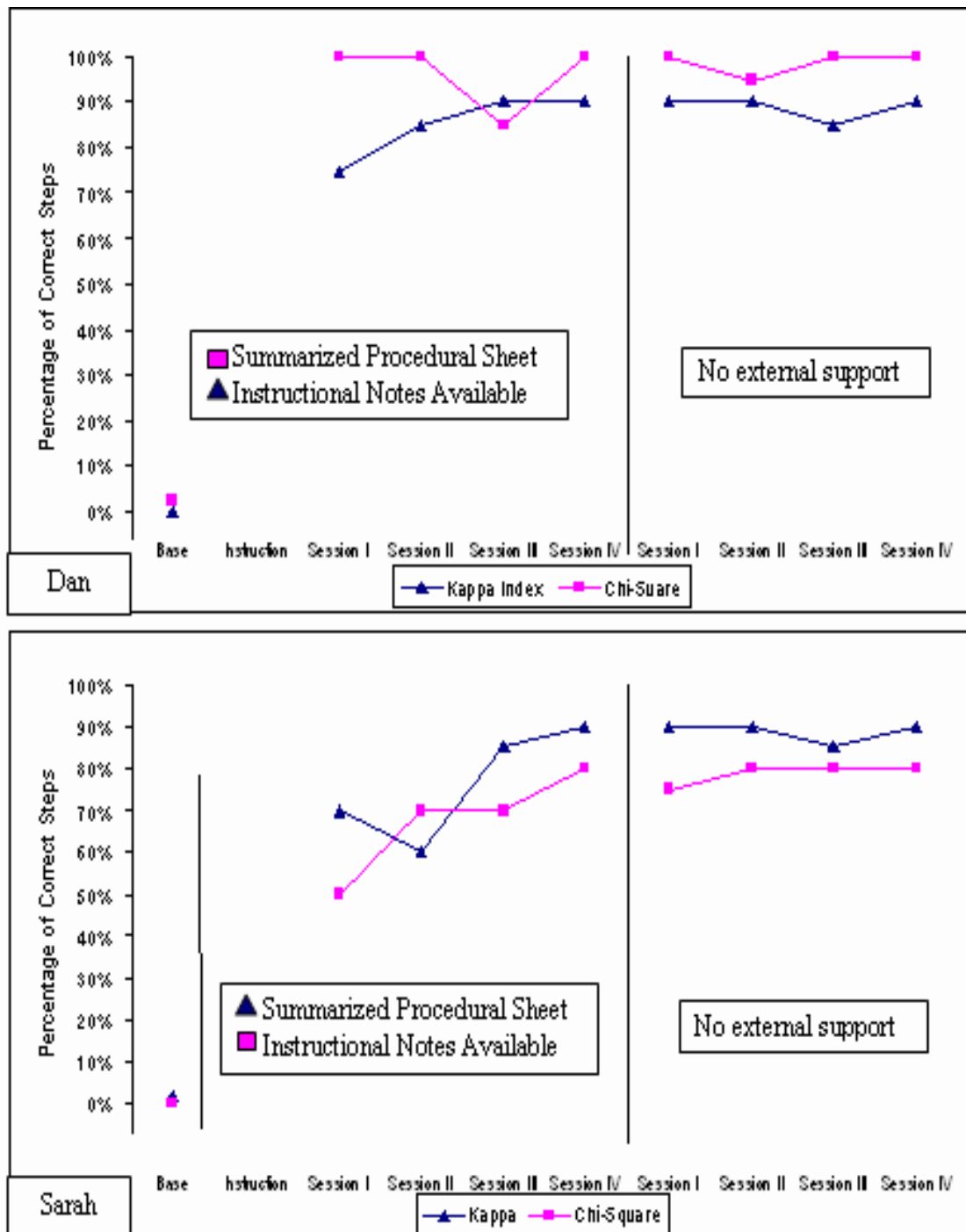


Figure 1. Participants' task performance during and after practicing using the GSPS, versus practicing using the notes from the instructional session



However, when practicing with the GSPS, subjects receive very explicit directions and prompts during the first trials, and their performance is high at the beginning. Data from both subjects indicates that as prompts begin to fade, some errors begin to occur. Nevertheless, both subjects overcame this phase and their performance improved in the next sessions.

Furthermore, both subjects were able to independently apply the skills learned at a level that is the same or slightly lower than their higher performance during the practice sessions. In both cases, the skills practiced using the GSPS were applied independently at a higher level than the skills practiced using the notes from the instruction session.

The average difference between the participants' performance when conditions for TSC were provided and typical practicing conditions was of 10% for Dan, and 9.4% for Sarah across all sessions. In a real context, such differences can account for the assignment of a different grade. Additionally, the visual analysis of the data indicates that, for the participating subjects, using the GSPS was an effective way to increase the level of performance while practicing and independently applying a newly learned skill. Therefore, it seems reasonable to infer that in these two cases the GSPS facilitated the TSC from written prompts to internal stimuli.

As previously discussed, recent research on TSC is generally focused on identifying conditions and schedules of reinforcement under which the transfer occurs, and is typically focused on individuals with special needs. The findings of the current study have implications for education in general, and emphasize Skinner and Vargas' conception that providing conditions for TSC improves the effectiveness of instruction.

However, there are several limitations to this study. Data reported is the result of both the

instruction provided and the practicing conditions. The author of the study took several measures to ensure that the instruction provided is the same across topics and subjects. However, real life conditions are not fully predictable and unknown factors may have had a differential influence from one case to another or from one skill to another. Another limitation is that, owing to his high intellectual development, Dan acquired with ease both skills and performed at a high level in both conditions. Therefore, his results may not clearly illustrate the difference in effectiveness of the two treatments. Further replications of the study should try to eliminate threats to internal validity related to the instruction provided and the selection of participants.

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# Using Lareau's "Concerted Cultivation" to Interpret Parenting Issues within a Canadian Aboriginal Community

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## Abstract

*The difficulties of improving educational outcomes of children from Aboriginal communities is well documented, including the role of parents. Lareau claimed there are only two parenting styles (concerted cultivation and natural growth) and that these map directly onto educational and social advantage. Narrative interview data will be used to support the claim that Lareau's sociological construct is suitable for interpreting parental styles within an Aboriginal community, but also that its bifurcated characterization is incomplete when applied to the case of an Aboriginal community. The parenting styles found within this Aboriginal community seem to lack cohesion, perhaps because the culture in which such styles would be embedded is diminished or non-existent; there are no cultural values for parents to draw on. Concerted cultivation could guide parents of an Aboriginal community when attempting to navigate a predominately Western school system, while also respecting traditional values that a community desires to recover and/or preserve.*

## 1. Introduction

The educational outcomes of children from Aboriginal communities is well documented and can best be described as much less than adequate. For example, according to Statistics Canada's 2006 census, more than 50% of Aboriginal persons aged 25 to 64 have a high school diploma or less. The percentage of Aboriginal compared to non-Aboriginal persons holding a university degree is still significant and has widened since 2001. Of particular import to this research, 50% of Aboriginal people aged 25 to 64 living on reserves did not hold a high school diploma [1]. For the reserve where this research took place, school division statistics indicate that over a quarter of children from the Aboriginal community do not complete high school, with drop out rates spiking at the beginning of the teenage years. Although this is much better than the national

average, both the First Nations community and the school division acknowledge that these drop out rates are unacceptable.

There are many factors that could explain the poor educational outcomes of Aboriginal communities, including systemic poverty and racism. For example, Frenette found that parental education and influence, among other factors, are significant in rates of university attendance when comparing low-income families with families of higher income levels [2]. Given the high levels of poverty within Aboriginal communities in Canada, it is reasonable to consider parenting issues within Aboriginal communities in relation to educational outcomes. This paper will consider the role of parenting within one Canadian Aboriginal community.

Based on in-depth ethnographies of 12 American families, Lareau concluded that parenting style bifurcates along class lines: working class and poor families exhibit an unstructured and directive parenting style labeled natural selection, whereas middle and upper class families adopted a concerted cultivation of their children's experiences; and that these two parental styles seemed to result in educational and social advantages for those children reared by a concerted cultivation parental style. Further, race was much less a factor than class: black and white middle class families, adopting concerted cultivation, exhibited similar educational and social advantages [3]. Because Lareau's work considered the class and parenting styles for a small sample of White and Black families, it raises questions of whether her constructs are generalizable, and whether they apply to families of Aboriginal heritage.

Several studies have considered the viability of Lareau's work. For example, a larger scale quantitative and longitudinal study by Cheadle found that concerted cultivation was a significant factor in accounting for black-white and Hispanic-white achievement gaps in reading and math achievement for children in Kindergarten to grade 3 [4]. Similarly, Bodovski and Farkas, using quantitative analysis for a sample of white first graders, found that SES strongly correlated with concerted cultivation, and that there is a modest interaction

between concerted cultivation and both test scores and the teacher's judgment of student language and literacy skills [5]. These studies are American and consider White, Black and/or Hispanic races. There does not appear to be any research that considers the applicability of Lareau's work as it pertains to parenting in a Canadian Aboriginal community.

The purpose of this paper is to consider whether Lareau's bifurcation of parenting styles is applicable to the parenting styles found within an Aboriginal community located in Canada. In particular, interview data will be used to support the claim that parenting style in this community is not grounded in concerted cultivation, which may disadvantage these children and parents as they attempt to navigate a predominantly Western educational system. Further, the data will suggest that natural selection also does not quite fit the parenting styles found in this community. It is speculated that this result emerges from the diminished or non-existent role of traditional cultural values to guide parenting.

## 2. Methods

A narrative and participatory approach guided methodological decisions. Bruner proposed that humans constitute reality and are constituted by narrative; that is, that meaning making is embedded in cultural narratives and is storied [6]. The stories of members of an Aboriginal community provide insights into the culturally rooted beliefs and practices of a community, including how notions of parenting are constituted.

Given the Aboriginal context, a participatory approach [7] guided research design, mindful that decolonizing methodologies must respect Aboriginal ways of knowing [8]. As such, the community was involved in all aspects of research design. In particular, members of the community participated in the design of interview questions, selection of interview candidates, collecting interview data and data analysis.

First, five categories of potential participants were devised, namely parents, grandparents and other care givers of children in school; children in school; young adults having recently finished or left school; other educational stakeholders; and Elders and other traditional knowledge holders. This research initially sought to illuminate knowledge, beliefs and values of this Aboriginal community, which suggested the need for a broad range of participants. As it turned out, the broad range of participants added to the verisimilitude of the results reported in this paper.

Two or three participants were interviewed in each category. Preliminary data analysis of the first participant guided subsequent interviews within and across categories, seeking to confirm or refute emerging themes. All interviews were performed by members of the community, who had been trained in

qualitative research methods. A total of 12 community members were interviewed.

Data analysis used a constant comparative approach and member checking [9]. As themes emerged, transcripts were revisited for further evidence or counter examples of a theme. Initially, several themes pointed toward notions of parenting that seemed to fit together. Subsequently, Lareau's parenting styles bifurcation was encountered, and provided a potent construct for unifying these parenting themes. Another reading of the transcripts suggested concerted cultivation was a valid unifying theme. An Elder, an educational stakeholder, and a parent provided further verisimilitude of this interpretation of the data.

## 3. Results

According to Lareau, concerted cultivation is a logic of parenting whereby parents significantly and deliberately insert themselves into all aspects of their children's experiences. Leisure activities are highly organized, such as extra-school programming, thus significantly reducing free play time. Conflict and new situations are negotiated between parent and child, so that the child has numerous opportunities to learn how to reason with adults. These children develop a sense of entitlement, that they have a right to negotiate their place in social circles; and they develop the skill to customize their environment, so they are able to effectively negotiate various social situations, including schooling.

Natural growth, on the other hand, assumes that a child's abilities will naturally emerge, given a safe and loving environment. These parents do not attempt to program the leisure time of their children. Further, these parents tend to issue more directives to their children, as compared to the discipline-by-reasoning common by parents of the concerted cultivation approach. These children learn constraint and develop a dependence on institutions to provide structured experiences. They do not develop an ability to customize their environment [10].

In what follows, data will be provided to support the claim that parenting within the participating Aboriginal community does not exhibit the qualities of a concerted cultivation parenting style. This data further suggests that the lack of a concerted cultivation approach seems to trigger educational disadvantages in terms of interactions with the local school that serves this community. The place of natural growth and parenting style in general, or lack thereof, within the community is also described.

The experiences of children from the community in the divisional school that serves the Aboriginal community seem to be characterized as struggling to succeed. Children describe their schooling with phrases such as, "I can't keep up with my work", "My parents know but can't really help me", and "I

have to do it on my own.” Such descriptions are not unexpected given the work of other Aboriginal education researchers.

Similarly, parents express frustration with the schooling experiences of their children. For example,

At parent-teacher interview, I asked the teacher to call if my son isn't getting work done, but they never call. Perhaps they are too busy or forget.

Members of the community wonder why is it always the children from their community that are put with the EA and receive more disciplinary actions by the school. Child-teacher interactions can easily devolve into resistance and deviant behavior by the child, rather than a reasoned negotiation of alternatives. These observations are supported by school division statistics.

Among all members of the community, there is an overwhelming sense of not knowing what to do when they interact with the local school. One parent noted, “I always want to intervene, but that's not my place to do so.” The data suggests that community members do not know how to customize their environment, at least as it pertains to schooling experiences.

In school experiences tend to be highly organized, which could contribute to the lack of success experienced by children from the Aboriginal community. Any positive experiences noted by the children had to do with open-ended, unstructured projects. The children from the community are not used to a highly structured learning environment.

The following quote from one family is suggestive of a general trend within the Aboriginal community's experience of schooling:

I always ask my daughter, ‘why don't you ask your teacher for help when you need it – that's what they're there for.’ She said, ‘well I try but the teacher always says to me to wait until I'm finished here and then I'll help you, which never happens.’ So she had to get help from another student that knew what to do.

Why doesn't the parent call the school and persist? Why doesn't the child work harder to get help from the teacher? The parents and children have not developed the skills to successfully interact within the highly organized structures of the school. They do not know how to “customize” the school environment to suit their needs. In other words, the skills that would accrue within a climate of concerted cultivation do not exist.

Some of the data suggests that a natural growth parenting style is evident within the community. There is evidence that extensive programming of children's experiences is not evident, although this observation is likely as much to do with poverty and availability barriers as it is a reflection of parenting style. There is also evidence of directive disciplinary

approaches to parenting, but the data did not suggest this was a pervasive trend.

On the contrary, the data seemed to suggest a lack of a cohesive parenting style. When checking this interpretation with several members of the community, it was discovered that traditional parenting styles are almost lost among the younger generations, and the cultural mechanisms by which such values and dispositions would be passed on from older to younger generations seem to be lacking or ineffective. An elder noted that natural growth appears to be a parenting style that would be synchronous with the traditional and holistic values of their community. But the data does support this possibility. Rather, the data suggests a lack of a cohesive sense of a parenting philosophy that guides the dispositions and values of the community as they pertain to the rearing of the next generations.

#### 4. Conclusions

A danger with this analysis is to conclude that parenting within the participating Aboriginal community is deficient. It should not be concluded that concerted cultivation is the “best” parenting style, although it does seem to accrue advantage to children as they navigate social circumstances. Nor should it be concluded that care givers in Aboriginal communities should take up concerted cultivation.

It is well established that parental involvement is positively correlated with school success. When families are involved in home-work activities and in-school opportunities, their children achieve higher grades, have a better attitude toward schooling, and graduate at higher rates, among other indicators of success [11]. But parental involvement with schooling among at-risk populations is much less compared to mainstream parenting groups [12]. The problem is perpetuated by blaming parents for negative school outcomes:

One of the outcomes of low involvement rates is that Aboriginal parents, through their non-participation, are held partly responsible for the overwhelmingly negative statistics concerning Aboriginal education without a comprehensive understanding of the reasons for this phenomenon [13].

Yet blaming parents undermines parental involvement. Data from this study suggests that parents from the participating community feel unable and/or unwilling to interact effectively with Western institutions such as schooling. This conclusion is not a deficit statement concerning the parenting within an Aboriginal community. Rather it is pointing to the difficulty of effective interaction across cultural barriers.

Doolittle, in the context of mathematics education, argued that Aboriginal communities need to draw in the knowledge of Western culture that

they need to be successful when interacting with the Western world [14]. Perhaps a parallel can be drawn for parenting styles. That is, Aboriginal parents develop concerted-like skills, which are employed when dealing with White institutions such as schooling. Such a recommendation must be tempered by respect for the traditional values of a community.

Natural growth should also not be rejected as a parenting style. Elkind argues that unstructured imaginative play is important for developing academic learning and social negotiation skills [15]. Lareau noted that advantages do accrue to children raised with a natural growth approach, such as the ability to respond effectively to unstructured learning environments; this possibility seemed evident within the data for this study. Natural growth may also be a potent starting point for revitalizing some of the nearly lost traditional parenting values of the participating Aboriginal community. Cultivating a community consciousness toward parenting may be more important than attempting widespread adoption of concerted cultivation.

## 5. Future Work

Future research could consider educational opportunities for parents within an Aboriginal community. There appears to be little research in this area in Canada, but work with Australian Indigenous families suggests that culturally responsive positive parenting programs can be effective [16]. This is a risk-laden agenda because of the potential for deficit models undermining any interventions. On the other hand, a shift from “accumulation of knowledge” to “cultivation of pre-existing skills” is a potent disposition when designing education opportunities for marginalized populations [17]. Such a shift seems particularly apropos when engaging with parents and care givers within an Aboriginal community.

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## **Session 15: Elementary and Primary Education**

Acquiring Inclusive Beliefs and Practices: One "Exemplary" GEN Elementary Teacher Reflects on his Development"  
(Michelle N. Pompeo)

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# Acquiring Inclusive Beliefs and Practices: One "Exemplary" GEN Elementary Teacher Reflects on his Development"

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## Abstract

*This qualitative project will investigate how "interventionist" general education (GEN) teachers have learned to successfully teach (e.g. differentiate instruction) and include (social inclusion) children with exceptionalities (both "at risk" and identified) in their classrooms. 15-20 GEN elementary teachers, in the Junior/Intermediate streams, from 2 local school boards in Ontario will be purposefully selected. Principals will distribute the letter of information to all J/I teachers with a minimum of 5 yrs teaching experience [5]. The 15-20 teachers will answer the P-I (pathognomonic-interventionist) Interview. From this larger sample, 5-10 highest scoring will be selected for a series of in-class observations and follow up interviews. From this 5-10 sample, the highest scoring GEN teacher will be asked to participate in follow up interviews on his development. This presentation will focus on the reported and observed practices of this particular teacher.*

## 1. Introduction

Since most current general education teachers may not have been prepared for inclusive teaching practices, or prepared by relatively limited hours of instruction in special education, then, how do general elementary teachers learn to successfully teach inclusively? While the literature does provide us with a composite sketch of what "effective teachers" and "effective inclusion" teacher s look like, it rarely provides us with specific details and in-depth accounts of their development.

## 2. Literature Review

Work by Jordan and Stanovich [1] found examples of successful inclusive practices in general education classrooms [2]. Their studies

were helpful to develop measures to identify examples of successful inclusive teaching practices (e.g. how beliefs about students with SEN are linked to the quality and frequency of instruction all students will receive) and to provide evidence of the existence of successful inclusion teachers in practice; these teachers are termed "Interventionist". According to Jordan and Stanovich [3], however, such "Interventionist" inclusion teachers are not the norm in our publicly funded schools. We must continue to learn from the development of "Interventionist" teachers, given that 80% of students with exceptionalities are now educated in the regular classroom [6].

## 3. Analysis of Findings

### 3.1. Methodology

15-20 general elementary teachers in Junior and Intermediate streams, from 2 local school boards in Ontario, will be purposefully selected [11] Principals who agree to the study will distribute the letter of information to all Junior and Intermediate (ranging from grades 4-8) core teachers who have a minimum of 5 years of teaching experience [4]. Interested teachers will self select into the study. 15-20 self selected teachers will be interviewed according to the Pathognomonic-Interventionist (P-I) Interview [3], which consists of 25 detailed questions to determine teachers' beliefs and practices about children with SEN in the general elementary classroom. Teachers' qualitative responses to the structured interview will be scored. Teachers who score highly are "Interventionist," while teachers who score lower are "Pathognomonic". The letter of information indicates that some teachers may be asked to participate in observations.

The classroom practices of 5-10 highly scoring "interventionist" teachers will be observed using The Classroom Observation

Checklist for including children with SEN in the regular classroom. The observations will not be scored, and the checklist will be used as a way to help structure my observations. 5-10 teachers' instructional practices will be observed, 1-2 times a week, for a period of 6 weeks. Observations will occur across core subjects (e.g. Math, Language) and at different times of the day. Extensive field notes will be taken and any new positive teaching practices not identified on the checklist will be recorded. Observations are necessary for the creation of questions to be asked in follow up interviews.

After approximately 10 observations per teacher are completed, teachers will be interviewed a second time. They will be asked specifically about their beliefs and positive practices and how they acquired them.

This presentation will focus on one teacher's beliefs and practices about including his students with SEN in the GEN elementary classroom, and how he believes he acquired these beliefs and practices over his 8 year teaching career.

**3.1.1. Theoretical Framework.** The theoretical framework will draw specifically from the Etienne Wenger's (1998) – Social Theory of Learning-, notion of "Communities of Practice" [17]. This theoretical approach informs how teachers were viewed in relation to their pedagogical practices with students with exceptionalities. That is, teachers have individualized attitudes, but such attitudes and practices are heavily influenced by their situated communities (other teachers, administration, the school, and broader institutional influences). This contribution aids my understanding of elementary teachers' attitudes towards; children with disabilities, their own abilities to teach them, current practices, and their preparation in special education in relation to their current practices

The perceptions of successful teachers, in the form of qualitative data, will be coded, themed and analyzed based on the constant comparative, single case, and cross case analyses [7]

## 4. Contribution to Knowledge

Findings will add to the emerging knowledge base on the development of "Interventionist" teaching, providing teachers with positive instructional, social, and collaborative strategies for the successful inclusion of our diverse learners.

## 5. Conclusion

This highly effective "interventionist" teacher cites many factors contributing to his overall development. Factors have been divided into 2 broad areas of focus:

- Personal beliefs and experiences: his experience with people with disabilities from a young age, his belief in "inclusion" as a philosophical movement to be applied to school practices, his beliefs about all students, with or without "disabilities" or "exceptionalities", his beliefs about "disabilities", his beliefs about the role of a teacher, holding high expectations and encouraging goal setting for all students and himself.
- Preparation and training in inclusive practices, such as Differentiated Instruction, from an International perspective; the nature and focus of the bachelor of education program in Australia, the local Catholic Board's inclusion policy, an inclusive principal, former school training in the "Tribes" program; a way of being and learning in the classroom, ongoing professional development specifically related to the Tribes program, an attitude of gratitude towards Educational Assistants, and ongoing reflection of his daily practice.

## 6. Future Work

This work has implications for Pre service programming. Future work in this area might want to continue [8], [9] to consider the importance of teaching bachelor of education students specific beliefs and practices which have been known to lead to inclusive practices [16].

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# Enhancing Effective and Qualitative Primary Education in South Western Nigeria: An Appraisal of Oyo and Osun States

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## Abstract

*The study is an overview of the multiple efforts at ensuring quality education at the primary schools in Nigeria. Triangulation approach was employed. Six hundred teachers were selected through stratified sampling techniques. Data was collected using a questionnaire on 4-point Likert rating scale. The results showed that 54% of the schools in the 2 states are yet to implement the 1:30 teacher pupil's ratio as stipulated in the National Policy on Education. School Attendance Registers ( $F=0.059, df=1,526, p>0.809$ ) and Record of Works are badly kept in the schools ( $F=0.11, df=1,521, p>0.7$ ). The classroom test and examination questions given to the students are defective and not reliable ( $F=0.22, df=1,513, p>0.83$ ). Also the language of construction was bad ( $F=0.439, df=1,519, p>0.539$ ). It was also revealed that there were more female teachers (66%) than male (31%). Most schools were also found to lack Elementary Science Laboratory as stipulated in the National Policy on Education ( $F=0.469, df=1,513, p>0.883$ ).*

## 1. Introduction

The provision for quality education has become a major concern worldwide. The concern for quality education is reflected in the inauguration of Education for All (EFA) in Jomtien-Thailand (1995) and Dakar (2000). Another 56<sup>th</sup> session of the United Nation General Assembly was called in 2001 in order to ensure the implementation of the Millennium Development Goals (MDGs).

According to the framework by the United Nation General Assembly, every member state should be committed to the attainment of the following goals:

- ensure that by the year 2015 all children particularly girls, children in difficult circumstances and those belonging to the ethnic minorities have access to a complete free compulsory and good quality primary education,
- ensure that the learning needs of all young people and adults are in line with the MDGs,
- eradicate extreme poverty and hunger,
- achieve Universal Primary Education by 2015 [1].

It thus becomes mandatory for Nigeria as one of the signatory countries to implement the UN (2001) mandate that compel all signatory countries to provide high standard and good quality primary education for every children. Nigeria decided to launch the (UBE) Universal Basic Education as a strategy to bring education to the children. As a result of this, more schools were established. According to Egwu, there are conflicting

statistics about the number of primary schools, while a source put it at 54,434 public primary schools in Nigeria [3]. On the other hand, another source the school census put the number at 87,941 with an enrolment figure of 24,422,918. Out of which males are 13,302,269 (55%) while female figure is 11,120,649 (45%) indicating gender imbalance of (83.6%). Other problems facing primary education according to Egwu is the wide disparity between the expected school enrolment and the actual enrolment. Based on the target set, the expected enrolment is suppose to be 34.92 Million but the actual enrolment figure is 24.42 Million, leaving a short fall of 10.5 Million [2].

In Nigeria, before this time, there is problem with quality assurance. Generally, education at all levels in Nigeria is experiencing decline in standard, infrastructure decay, examination malpractice, absence of institutionalized quality assurance system and poor performance of the inspectorate services. In Nigeria, the old model of inspection practices in education that were inherited from the colonial government has remained unchanged. Evidence today has shown that it is ineffective, weak and outdated. In view of the above, the present study is designed to discuss the problems with primary education in Nigeria, identify cause of decline in standard and quality, and describe the current efforts at ensuring quality primary education in the country. In order to effectively achieve the above objectives, the following questions are generated.

## 2. Research Rationale

After a review of relevant literature on the quality assurance and Universal Basic Education at the primary school level, this paper will provide empirical answer the following questions:

- what are the components of universal Basic Education?
- what is the status of UBE in the two states?
- why the decline in standard and quality of primary school education?
- what are the quality assurance model proposed?
- to what extent are these quality assurance models being implemented or incorporated into UBE?
- what impact does it have on quality and standard?

## 3. Literature Review

Universal Basic Education is the education provided for children between the ages of three and 14. It is made up of 3 years of Early Childhood Care Development and

Education (ECCDE), 3 years of primary and three years of Junior Secondary Education. With specific reference to Nigeria, it covers other special areas like mass literacy, nomadic and migrant children, and the children in the river rhine areas, almajirias and physically disabled children.

On the status of Universal Basic Education, there are still problems and challenges in provision of facilities, enrolment of pupils and provision of quality teachers. These challenges made the Federal Ministry of Education launch an aggressive National Campaign on "Access" so as to intensify mobilization in support of pupil's enrolment and retention. Not only this, the Ministry of Education also made effort to review and update the Universal Basic Education Act to enforce the provisions that make enrolment and retention of pupils compulsory. According to the UBE Act, the Federal Ministry of Education is to work hand in hand with other organization like National Orientation Agency, National Directorate of Employment and National Poverty Eradication Programme to provide incentives to parents/guardians of school children in areas with low enrolment. Also by 2011, provide 4,000 additional classrooms per annum for pre primary and 22,000 additional classrooms per annum for the primary schools. It is also envisaged that by 2011 the Universal Basic Education would have attained the following enrolment targets: 27,900,796 for primary education 4,407,071 for Junior Secondary Education and 3,127,395 for Early Childhood Care Education [3].

Presently there are challenges of professionally qualified teachers. According to Egwu, there are alarming difference between teachers certified qualifications, their actual teaching competence and performance on the job and a large number of teacher below National Certificate in Education (NCE) abound in North-East and North-West, (70%) [4], [5]. Based on statistic from Teachers Registration Council of Nigeria, the shot fall in competent, certified and qualified teachers are: 969,078 for Early Child hood Care Development Education; 338,147 for primary education; 581 for JSS, 1,580,000 for adult literacy and 12,329 nomadic education [6].

### 3.1. Quality Improvement in Primary Education

Quality assurance is a mechanism used to evaluate the efficiency and appropriateness of teaching and learning in primary schools so as to ensure the delivery of high quality education. It is also a holistic method of identifying and resolving problem within the educational system in order to ensure continuous quality improvement. It can also be described as means of disseminating information regarding the quality of primary education.

According to Bateman, quality assurance includes defined standards of achievement, documented procedures for all identified processes, established ways of responding to issues and clear accountability for outcomes [1]. The Importance of consistent and continuous quality assurance in primary education is many. Some of these benefits associated with consistent quality assurance and continuous Quality improvement measure in education include:

- the establishment of establish high standards academic excellence which will go long way to enhance the schools reputation and image,
- improved communication across the school system,
- improvement of outcome so that the policies and procedures are constantly revisited through analysis and the delivery of teaching and learning,
- identification of systems strengths and weaknesses,
- determination of the program effectiveness and tracking of its integrity and;
- increase in capacity to secure funding and refinement service delivery.

### 3.2. Standards and Quality Assurance in Nigeria

According to the National Minimum Standards on Education and Establishment of Institutions Act 16 of 1985 in conjunction with the 1999 Constitution, the Minister of Education was empowered to maintain standards, and quality [8]. This is done by setting minimum standards maintaining and constantly improving all schools in the Federation. In order to achieve uniform standards, the Federal Ministry of Education delegated the task to the Federal Inspectorate Service (FIS) Department. One weakness of the Education Minimum Standard Act 16, of 1985 is that the FIS was not legally backed by legislation to cover all schools. In this respect the Act 16 of 1985 was amended to provide adequate legal backing for ensuring quality assurance at basic and post-basic education levels. With this amendment, quality assurance in education in Nigeria shifted from the old system of school inspection to constant and continuous monitoring, evaluation and quality improvement processes that provide new operative mode of evaluation. The new system is designed in such away that the evaluation inputs, processes and output meet the set standards so as to bring about improvement in teaching and learning in the foundational class. In summary, quality assurance connotes the goals to which all primary school pupils, teachers, staff and school leaders must achieve. According to National Educational Quality Assurance Policy, Nigeria is concerned with 8 components of quality standards itemized as:

- learner achievement and standards;
- learners welfare and participation;
- care guidance and support;
- leadership and management;
- school community relationship;
- learning environment;
- teaching and learning;
- curriculum and other activities [9].

## 4. Methodology

The study employed descriptive survey design. The sample was selected from primary schools in Southwestern part of Nigeria, precisely Oyo and Osun States. A sample of 600 primary school teachers was selected from eleven L.G Areas within the two states. The research instrument used is made up of interview schedule and observational checklist scale. The questionnaire schedule contained 56 items that were

divided into four sections. Section 1 concerns the demographical data of the sample; section II, school facilities and quality. Section III different quality control measures put in place while section IV is concerned with challenges, problems and the impact of the quality assurance model.

## 5. Results and Findings

The data collected in respect of the qualifications of the teachers from the eleven local government areas sampled showed that 62.2% had National Certificate of Education (NCE), 19.8% had Grade II Certificate, 4.8% Associate Diploma in Education and 13.2% with Degree in Education. Based on the National Policy on Education (NPE), the minimum basic qualification to teach in the primary schools in Nigeria is NCE. It implied that majority of the teachers in the two states sampled possess the required qualification. It means that they met the required standard set for would be teachers to teach in primary schools in Nigeria (NPE).

On designation, years of experience and number of pupils per class. Seventy-Seven point five percent of the sample was classroom teachers, 7.8% head teachers 5.7% Assistant head teachers and 0.5% local inspectors of education. With respect to teacher's years of experience, the result showed that 10.3% of the teachers had been in the service between 1 to 2 years, 27.5% for 3-5years, 11.9% between 6-8years, 20% between 9-11years and 27.7% for 12 years and above. The implication of this to the study is that majority of the teachers are experienced while only 0.7% were new entrants.

On the extent of the implementation of the quality model in terms of teacher- pupil's ratio as stipulated in the National Policy on Education, the result of the data collected revealed that most classrooms are overcrowded only 4% of the teachers have 20 students in their classrooms. Thirty percent has between 21 and 30 pupils. 51.4% between 31 to 40pupils and 3.7% has 41 and above. The result obtained showed that the schools are yet to adhere strictly to small class enrolment as stipulated in the UBE and NPE.

In order to ascertain the standard and quality of the schools facilities provided, a one-way analysis of variance was conducted on the following variables (i) adequate classroom facilities (ii) furniture (iii) Elementary Science Laboratories (iv)library. It is the consensus opinion of educators that for effective learning to occur, the learning environment must be conducive. Not only this, quality facilities such as teaching /learning materials must also be readily available. When the responses of the teachers on schools facilities were compared across the eleven local government areas, the analysis of variance for adequate classrooms showed ( $F= 7.049$ ,  $df= (1,159)$   $p< 0.08$ ) which was significant. For furniture, ( $F=5.646$ ,  $df=(1,516)p<0.018$ ), condition of furniture whether conducive for learning ( $F=6.160$ ,  $df=(1,516)$   $P< 0.13$ ). The teacher's response on the condition of the classrooms for teaching and learning revealed that there was a unanimous agreement that the classrooms were in good condition for teaching and learning ( $F=10.953$ ,  $df = (1,520)$   $P<. 001$ ). On the availability of

Elementary Science Laboratory, functional computers and library in primary schools the results also showed that most schools do not have elementary science laboratory ( $F=0.460$ ,  $df= (1,519)$   $P> 0.498$ ) and few schools have computer room ( $F = 0.159$ ,  $df = (1,520)$   $P> 0.979$ ). The result however showed that there are well equipped library ( $F = 8.159$ ,  $df = (1,508)$   $P<0.04$ ). With regards to space, the result obtained revealed that the teachers were of the opinion that it is spacious and conducive for both students and teacher's use ( $F= 4.751$ ,  $df= (1,519)$   $P< 0.03$ ). Finally on availability of sports facilities in the selected schools, the result showed that the selected schools have sporting facilities ( $F = 6.39$ ,  $df = (1, 153)$   $P< 0.012$ ).To determine the quality of the instruction given to the pupils, an assessment of the lesson given was carried out. The area assessed are: teacher's lesson notes, the stated objectives, the tests given, assignments, availability of test blue prints and tables of specification. The results revealed that teaching was of good quality. Also the teachers stated instructional objectives are well stated ( $F = 3.453$ ,  $df = (1,531)p<0.064$ ). The stated objectives are also relevant ( $F = 5.271$ ,  $df=(1,525)$   $P< 0.022$ ). However on the quality of the type of classroom tests administered, the results revealed that they were of poor quality, the results also showed that the tests given to the pupils were relevant ( $F - 1.76$ )  $df= (1,526)$   $P< 0.185$ ) but inappropriate ( $F = 0.439$ ,  $df = (1,524)$   $P< 0.508$ ). It also showed that the coverage and contents were inadequate ( $F = 0.292$ ,  $df = 1,525$ ,  $P> 0.589$ ). One can conveniently say the tests administered were inappropriate and inadequate. The reasons are not farfetched; this is because there are no test blue prints and table of specification ( $F = 0.22$ ,  $df = (1, 513)$ ,  $P> 0.883$ ). With respect to the quality of school inspection, the areas assessed are: frequency of inspection, student's attendance register, teacher's Record of work, Schools Diary and Mark sheets. An assessment was carried out on them, to determine whether they are well kept and whether the pupil's scores are credible. The results obtained revealed that schools supervision, monitoring and inspection are frequent ( $F = 3.461$ ,  $df = (1,505)$   $P< 0.063$ ). However Schools Diaries are not kept up to date ( $F = 0.812$   $df = (1,523)$   $P>0.368$ ).Attendance Registers are also not signed and kept up to date ( $F =0.059$ , $df = (1,526)$   $P>0.809$ ). This has serious implication for schools this trend must be corrected.

With respect to the adequacy of the teachers mark sheets, the result of the data collected showed that the pupils scores that the teachers entered into them were credible ( $F = 2.15$ ,  $df = (1,522)$ .  $P<0.143$ ). It also revealed that the dates the scores entered were indicated and signed ( $F = 5.147$ ,  $df = (1,522)$   $P<0.024$ ). It therefore means that the pupil's scores as entered by the teachers are credible and reliable.

## 6. Conclusions

The following summary is made based on the results of the analyses: The teachers in the selected schools are qualified and well experienced. There are more female teachers (66%) than the male teachers (34%). Most classrooms are overcrowded. This implies that schools are yet to adhere to the teacher-pupils ratio of 30 pupils

in a class. Schools facilities, classroom items and furniture are adequate. Library facilities were provided and adequate. Schools do not have science laboratories in schools. Attendance register and record of works were poorly kept in schools. There is constant monitoring, supervision and inspection of schools. The class tests and examination questions were of poor standard. This is due to lack of table of specifications. In addition the language of construction is in adequate and inappropriate,

## 7. Recommendation

The present study has revealed that the current effort of the federal and state government at revamping primary education has objectively yielded good fruits. However much needs to be done in the area of: provision of modern Elementary Science laboratories and ICT facilities in the primary schools across the country. Workshops and training should be provided to equip the teachers on how to develop reliable and quality test items for teachers. Proper keeping of schools Attendance Registers, Schools Diary and other records are of paramount importance. Also schools inspection should be more thorough. Decongest the over crowded classrooms to a smaller class size. Construct modern classrooms equipped with basic amenities so that there will be facilities for the new nine years in the primary schools (9-3-5 system of education). There is also the need for the recruitment of more qualified teachers.

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# Skin deep? Analyzing an Elementary Teacher Education Program's Incorporation of Diversity

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## Abstract

*This paper engages educators in discussions around advocating diversity within a teacher education program an exploration of the curricula analyzed, of the process by which curricula were analyzed, and of the implications of social justice curricula existing only “on paper” for accreditation purposes rather than being enacted within courses. Reflections from faculty responsible for the assessment suggest that while diversity may appear as incorporated within curricula, it may in fact only be skin deep.*

## 1. Introduction

Schools of education have the potential to become major forces for social justice and change: places conducive to “critical inquiry and meaningful dialogue” [1]; places where democracy and social empowerment are emphasized. Such transformation involves processes that challenge and open up spaces for preservice teachers to question oppression, power, and privilege within global, societal, institutional, and individual contexts [2], [3], [4], [5], [6]. These processes also require that preservice teachers recognize dominant culture practices and norms and the multiplicity of identities and experiences that enter into their future classroom environments [7]. This process is not simple as research suggests the preservice teachers often resist new knowledge that challenges their experiences with regard to the realities of oppression, power, and privilege [8], [9]. This resistance to learning is compounded by the growing disparities between teachers, who are predominantly white, female, middle-class, heterosexual, and abled, and the culturally and linguistically diverse student populations [10], [11], [12]. Moreover, many preservice teachers tend to cling to and defend discourses that privilege those of the dominant culture [13], [14] - discourses that deny opportunities for people who are seen as “Others,” people who are underrepresented, and/or who are marginalized in society [15]. Therefore, the preservice teachers often have difficulty considering their responsibility as educators to employ social justice curricula [16], [17]. Furthermore, once they have entered the field

as “certified teachers,” some have acknowledged their lack of effective preparation in working for social justice and change with diverse populations, despite the fact that their teacher education programs included a diversity component [18].

We acknowledge preservice teachers’ resistances to diversity and social justice, and research indicates that stand-alone diversity/multicultural courses are insufficient to challenge these resistances [19], [20]. Therefore, we must go beyond the one-course-wonder and permeate issues of diversity and social justice. That is, we recognize that teacher educators and teacher education programs are responsible for providing experiences through/in which preservice teachers might overcome or begin to dismantle resistances [7], [20]. With this in mind, the preparation process for initial professional accreditation through the National Council for the Accreditation of Teacher Education (NCATE) was used as a catalyst for transforming program curricula and permeating diversity throughout our teacher education program. At the time of the program’s review, all program curricula incorporated issues of diversity.

Following the announcement of achieving national accreditation, the authors of this paper began to question the authenticity of the curricula transformation. What did we learn during the process of curriculum analysis and what might we do differently in the future? What did curricula indicate about teacher educators’ beliefs regarding diversity and social justice? What indicators/outcomes suggest that diversity and social justice are permeated in meaningful ways and not just skin deep? That is, the purpose of this paper is to engage educators in an exploration of the curricula analyzed, of the process by which curricula were analyzed, and of the implications of social justice curricula existing only “on paper” for accreditation purposes rather than being enacted within courses.

## 2. Context and Discussion Springboard

The site for this inquiry is in a teacher education department at a small university, which is also one campus of a multi-campus public land-grant

university in the Mid-Atlantic region of the United States. The university is located within an urban area, but also enjoys suburban and rural geographic proximity. Undergraduate and graduate programs offered within the teacher education department include initial certification for elementary education and for secondary mathematics, English, and social studies, and advance certification in teaching and curriculum.

This paper focuses on the elementary teacher education program in which we all were faculty, and we limit the reflections to the three years of self-study, 2004-05 through 2006-07, the period during which faculty prepared for NCATE review. The preservice teachers enrolled in the university's elementary teacher education programs were predominantly white, female, and middle class. In addition, during the three years of self-study accreditation preparation, the number of elementary education faculty from underrepresented groups increased from 16% to just over 26%.

In July 2004, with the university administration's and the teacher education faculty's desires for program national accreditation, Author #4 was hired as the teacher education's department coordinator for the pursuit of national accreditation through the National Council for the Accreditation of Teacher Education (NCATE). Charged with leading the alignment of the teacher education programs with core national standards (such as the National Council of Teachers of Mathematics standards), Commonwealth standards, as well as NCATE standards, Author #4 assembled sub-committees around each of the NCATE six standards. For the Standard IV (Diversity) committee, Author #1 served as a co-chair, Author #3 and Author #4 served as members, and Author #2 periodically served as a reviewer of the diversity data as well as the diversity portion of the Institutional Report.

Reflections and subsequent questions offered for this paper presentation are based on our experiences within the Standard IV sub-committee. We first examine our curricula analysis as related to NCATE Standard 4a, Design, Implementation and Evaluation of Curriculum and Experiences. The process of curricular analysis began with identifying a collective operational definition of "diversity" by the teacher education faculty. The Standard IV Committee sent via email the NCATE definition of diversity to all teacher education faculty members, who were asked to submit any additional considerations. All feedback were compiled and presented at a teacher education faculty meeting for consensus during which the following was constructed: To align with the strategic direction of the University and Penn State Harrisburg, the Teacher Education Unit within the School of Behavioral Sciences and Education at Penn State Harrisburg developed a very specific definition of

diversity that we believe reflects the knowledge, skills, and dispositions that should be evident in both our candidates and our faculty. Diversity means differences related to identities, subjectivities, experiences, and cultures. It may incorporate attributes such as race, gender identity, ethnicity, sexual identity, religious beliefs, geographical location, age, socioeconomic status, local/state/regional/global/country of origin, culture, language, physical size, ability, learning style, educational background, social status, employment, professional status, marital status, historical experiences, traditions, customs and rituals, values and lifestyles. Acceptance of diversity acknowledges and respects people's total identity and social existence based on their individual social values and beliefs to ensure social justice for everyone. Our definition of diversity guides and influences the recruitment and retention of candidates and faculty, our research and pedagogy, our programming, and our outreach and service to both internal and external communities.

We then asked faculty to identify goals, objectives, and assessments from their syllabi which reflected the faculty's diversity definition. Finally, we used the faculty's diversity definition and the NCATE rating system to analyze syllabi collected from the teacher education faculty. Feedback and suggestions were provided by the Standard IV (Diversity) committee in an effort to demonstrate explicit course alignment with NCATE standards and the teacher education faculty's definition. The resulting feedback and suggestions were presented and discussed for further input and insights during the multiple NCATE meetings chaired by the NCATE steering committee and by the Standard IV (Diversity) committee. Teacher education faculty were given multiple opportunities to discuss Standard IV (Diversity) committee's analysis of syllabi with Standard IV (Diversity) committee members, and other teacher education faculty. Revisions made by teacher education faculty to syllabi, as a result of the feedback and discussion, were collected again to assess changes.

At the time of accreditation review, all elementary education courses incorporated issues of diversity (curricular data will be presented). Furthermore, NCATE Standard 4a was deemed acceptable and without any restrictions or any indicated "Areas For Improvement" (AFI). It would follow, then, that this particular teacher education program was able to demonstrate that it provides experiences through/in which preservice teachers might overcome or begin to dismantle resistances. So why are we skeptical?

### 3. Conclusion

Through this inquiry, we discovered that teacher educators were willing to incorporate syllabi revision suggestions made by the Diversity committee in ways that articulated elements of diversity. However, as evidenced by preservice teacher perspectives, the pedagogical practices employed by teacher educators reflected the course as status quo. Furthermore, several teacher educators' language and behaviors within program professional spaces (professional development and meetings) reflect hegemonic understandings of teacher education. That is, some of the course syllabi transformations appeared on paper – they were skin deep. That this teacher education program's curriculum was rated "acceptable" by NCATE Board of Examiners raises some questions and issues for future inquiry. One issue is teacher educator dispositions. As Merryfield suggests, teacher educators teach what they know, and rate student dispositions according to their lenses. How might we provide teacher educators spaces in which they can come to understand critical diversity in order to incorporate such lenses in the courses they teach? Might it be worthwhile to investigate teacher educators' dispositions and understandings of diversity as a standard within accreditation processes? If what is assessed is valued, then how might Promotion and Tenure criteria incorporate teacher educators' practices and understandings of diversity within service, teaching, and/or scholarship? Perhaps most importantly, how might teacher education programs approach diversity as a community endeavor that leads to programmatic underpinnings and curricular, pedagogical, and field experiences practices?

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# Literature-Based Teaching Model for Enhancing Tolerance of Early Childhood Children in Multicultural Group in Yala Province Thailand

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## Abstract

*To enhance the tolerance to early childhood children, the development of an appropriate model of teaching was essential. Therefore, the integration of participatory action research and quantitative research were implemented to discover the quality of teaching models. This research aimed to develop types of teaching to help promote the children's tolerance. Literature becomes the major base for the early childhood children in multicultural group in Yala Province Thailand. According to this study, there were 4 steps of developments which were teaching model preparation, teaching model examination via trial and teaching model improvement. The developed teaching model comprised of principles, goals, contents and an assessment. The research covers 2 types of schools. Firstly, the multicultural students of Muslim-Thai, Buddhist-Thai and Chinese-Thai. Secondly, monocultural student of Muslim-Thai. There were samples of 127 children from five schools. The data was analyzed according to characteristic of data by content analysis and qualitative analysis. Meanwhile, the quantitative analysis to find out means and standard deviation. The means comparison by t-test was also employed. Thus the literature was appropriate to be employed as the teaching model to help enhance tolerance among these children.*

## 1. Introduction

The multicultural early childhood children in Yala province Thailand come from three main groups: Buddhist-Thai; Chinese-Thai and Muslim-Thai. Each of them goes to school with the background knowledge of history, social attitudes and beliefs which had been implanted by their own groups. When the teaching in a classroom does not put an emphasis on acceptance and value awareness, the conflict of living together occurs. Because of the lack of tolerance between different ethnic groups, human rights are abused leading to the conflict and violence. There are conflicts and violence in every society. The cultural conflict does

not appear in the different ethnic groups. People from the same nation also have different dimension of culture. The conflicts are due to differences in age and gender; group/gang; area; global-local/western-eastern; ethnic and nation. This incident reflects the violence resulting to the necessity of implanting the concept of peace in the children who have grown in the multicultural society in Yala province to live happily and harmoniously. Therefore, the design of learning how to live harmoniously should be emphasized in children from childhood. Learning management for them should focus on their happiness and the literature can be used for this purpose. Pre-reading and reading childhood enjoy literature. Reading good literature helps them develop and implant good attitudes in their mind. [1] Moreover, reading literature is a source of happiness. However, there is no learning model for enhancing social happiness especially tolerance for early childhood children. It is expected, then, that literature could be used for learning how to live happily. This leads to the development of a teaching model with the objective of enhancing tolerance using literature as a base for early childhood children in a multicultural group in Yala province. The advantage is getting the proper teaching model to enhance tolerance of early childhood children in multicultural group in Yala province as tolerance is one part of social happiness leading to a peaceful society.

## 2. Literature Review

To live in harmony and happily is one part of learning. According to peace studies, peace is not only developing the peace between persons or the relationship between humans and the environment but also enlightening a human being's morality. According to this concept, children's minds, souls and attitudes towards society will be developed properly. A deep sense of this concept should be implanted in them from early childhood. It should start with acceptance and realization of one's self-esteem and others [2]. Also, the tolerance for living together should be enhanced. As implanting tolerance in adulthood is difficult to achieve so it is

easier to implant this concept during early childhood [3]. According to Ericson's Social Development, theory is mentioned by Finazzo and Russell. The concept was about using literature base for enhancing social development. The three stages were the periods of early childhood children. The first stage was trust versus mistrust from a baby to one year and six months old. Parents had to take care of their own kids for developing trust. They would feel someone was protecting them when they were discouraged.

The proper literature was a book or rhyme stating safety and guaranteeing the security from a mother or a mentor. As time goes by, they would enter the second stage, autonomy versus doubt from one year and a half age to three years old. The children begin to notice their surroundings. They discovered new things and tried to do everything on their own. However, while discovering things around them, they were curious and unconfident of the outside world. The proper literature, therefore, for them was about moral dilemma. For example, a girl had to make a decision between stealing bread for her sick mother or being hungry to be an honest citizen. Creativity could be obviously found when children are 3-6 years old. For Erikson, this third stage was initiative versus guilt. They learnt to understand and use reasons. They understood the conflict. When they made a wrong decision, they would feel guilty. The proper literature for them was about the pride when making a decision of their own despite being wrong.

Apart from Ericson's theory, Kohlberg's theory also talked about the development of human's morality. He divided the development level of reason and decision into 3 levels. Each stage had 2 periods which were relevant to each other.

The early childhood was in the first stage that was pre moral level. The first stage was punishment and obedience orientation. The children would avoid being punished. The proper literature was a moral literature where a reader had to make his own / her own decision. The second stage was native instrumental hedonism. The children would search for enjoyment. The proper literature was about character whose behavior was not acceptable such as selfishness resulting in a bad consequence.

According to Erikson and Kohlberg's theory of emotional and moral development, it was seen that literature could enlighten readers. Aside from the development of language, intelligence, emotion, society and morality, it also developed beauty appreciation which was important for human's lives. That was because children all grow up in different societies resulting in different experiences. They gradually developed the sense of cultural appreciation which was around them. Their intelligence, initiative and imagination had a

relation with schema and scaffold. So, the proper literature for enhancing appreciation was songs, poems, fables, tales from different ethnic groups from children's culture or from others. Painting and art work which appeared in literature also helped to enhance children's development. [4,5] All the theories of applying literature exhibited the importance and necessity of using literature for developing children through the integration of literature and theory of development with the application of literature which the teachers and the guardians could employ for developing students both in school and at home.

Finazzo Russell, an academic, gave the meaning of literature as the styles of writing both prose and poem such as book, poetry, manuscript, newsletter, publishing, lecture, speech and computer program. These reflect the period of the time, culture and people which are special and beautiful. Literature covers tales, poetry and performance. It could be reality and imagination, fact and magic. The style could be short or long consisting of words or no words. The illustration may or may not appear in the literature [4, 5].

Literature reflects human experience. It is conveyed through different form of language. It also includes daily life literature which is composed of written printed materials such as newspaper, cooking book, religious book, pet handbook, equipment and internet information. Children could indirectly experience the aforementioned material through parents, teachers or adults who used these materials. Literature also includes songs, essays which are broadcast through radio, T.V. programs, light signal and traffic signs which convey language and symbol but not necessarily written. [1] The use of literature as a base of learning is found in research abroad. Children can learn language through what they hear and read from their community [6]. There is also a report of the teaching model to enhance children's language development through the use of literature for early childhood children in the three southernmost provinces. This exhibits the proper use of literature for early childhood children in the three southernmost provinces [1].

### **3. Analysis of Finding**

This research resulted in the development of a teaching model to enhance tolerance through the use of literature base for the early childhood children in the multi-cultural society in Yala Province. It comprised the concept of a teaching model which focused on the acceptance and value awareness of their culture and other cultures for living happily together, how to manage language experience from the meaningful things for children

and how to help them accept the value of various literatures on children's way of life.

The above concept led to the main principle of the teaching model: respecting to individual values and differences. Local and national literature was used for learning and experiencing. It was widely opened and flexible for learners so that they were successful in studying. They also enjoyed themselves and helped each other while studying. This put an emphasis on the parents and the community to take part in the learning management and enhance their living together in order to accept and be aware of each other's value by learning how to control their tolerance. The objective of the teaching model was to enhance tolerance through literature base of early childhood children in the multi cultural society in Yala Province.

According to the concepts, principles and objectives of the teaching model, it led to the development of a process of teaching model. The contents were as follows:

### **3.1. Contents of teaching model**

**3.3.1. Process of learning for enhancing tolerance consisted of 3 stages as follow:** before using the literature; during the period of learning literature and the evaluation stage

**3.1.2. The topic and concept of managing learning for enhancing tolerance of early childhood children.** The main concepts consisted of 3 parts as follows: First concept of understanding and realizing the values of their own nations and other people's nations. The topic for learning was "I am Special". The sub topics were "My Identity", "My family" and "Good people I admire"; The second concept was about understanding and accepting the changes. The topic for learning was "Grief". The sub topic was "When our beloved is Far Away". It was about learning the loss, the evacuation and the death. The third concept was about the realization of friendship. The topic for learning was "Classroom Society". The sub topics were "Rules and Regulations", "Our Best Friend" and "Our Happy Classroom". All knowledge management was under the main topic of "Our Story"

### **3.2. Process of teaching model**

The 3 processes used were the pre stage of teaching model, the period while teaching and the stage to broaden their exposure to different kinds of literature in accordance with their own preferred style.

### **3.3. Principles of activity**

The principles of organizing the teaching model were as follows: The children could listen to their teachers, read together and read individually. The activity opened a chance to discuss about the literature which reflected tolerance in order to live happily. Activities included arts and music concerning the literature from different cultures. Moreover, children should be encouraged to express their feelings toward cultures. Writing and drawing activities after reading the literature of different groups should be held. After learning the literature from different cultural groups, there should be an exhibition. The activities must integrate the subjects such as languages, sciences, social sciences, music and arts.

### **3.4. Process of learning for enhancing tolerance**

The process of learning through the use of literature base consisted of 3 stages: before using the literature; during the use of literature and the evaluation of literature

### **3.5. Grouping**

The students were classified into 3 groups: a big group for doing activities together such as literature discussion; a small group for reading literature together and individual learning for reading independently, reviewing and reflecting through expressing ideas and creating the work in various forms. Giving the feedback after reading the literature was encouraged.

### **3.6. Learning atmosphere**

The learning atmosphere emphasized on the realization, acceptance and value awareness of social culture of learners and enhanced the value awareness of all types of books.

### **3.7. Environment**

For the management of learning environment and learning materials, the materials for decorating the room must be the ones enhancing the love and value awareness of reading all types of books. Also, they exhibited the diversity of culture. The literature media must be both local and international literature.

### **3.8. Period of learning**

The period of learning could be flexible in accordance with the students' interest. The learning process took place in the afternoon after a rest break. It was divided into 2 stages: the big group

activity for 20 minutes and the small group and individual activity for 60 minutes. The period of time was flexible.

### **3.9. Assessment**

The assessment of tolerance in children according to the plural cultural study was based on authentic assessment through using portfolios. Each student's data was collected according to indicator and portfolio system. The summary of individual students and the whole class were analyzed.

The quantitative analysis to find out means and standard deviation. The means comparison by t-test was also employed. According to the exposure competency scores of children's tolerance, the satisfaction and suggestions of the parents and administrators, it was found out that the developed teaching model is able to promote tolerance among the early childhood children

### **4. Contribution to Knowledge**

From the research, it was found that the discipline of the teaching model was based on the enhancement of staying happily by understanding each other and value awareness which was in accordance with a multicultural study. It was an important teaching method for cross-culture learning which was a process that each student would learn from his/her own culture and others. The children would have a chance to study conversation and communication to establish understanding among people. They could then live together and join the democratic activities which required their decision. [7] Moreover, cultural integration was the acceptance of cultural diversity. This did not mean to be preoccupied with other cultures but to respect them. Sometimes it was called cultural pluralism. This teaching model was not meant to put an influence over other cultures. On the contrary, it focused on the value awareness and acceptance of both one's own culture and others. The teaching model assigned the early childhood children to learn tolerance for studying together through studying the topic "Our Story". The sub topics were composed of "I am Special" "Grief" and "Classroom Society". This exhibited that implanting the concept of staying together started from acceptance and self awareness and having courage to encounter changes. The classroom could be a starting point to establish a small peaceful society. From the two types of schools: the bicultural and the monocultural schools, students from both schools could learn how to stay together.

This research was successful in applying various kinds of literature to enhance tolerance of

early childhood children. It was in accordance with the result of the research in that literature was valuable to children's learning. They acquired the knowledge and appreciation of literature from their family and society which were different especially the areas of the three southernmost provinces where there are diversities of culture [1] It was obvious therefore that the value of literature depended on how the teachers and parents applied it to their children. The value meant longer-lasting understanding of literature more than studying in the class. Besides assigning students to read or write simple stories slowly and think of new things while studying the literature, the children were required to imagine a better world. [8] So, that was the application of literature for managing children's learning leading to living happily.

### **5. Conclusion**

The teaching model to enhance early childhood children's tolerance through the use of literature base in the multicultural society in Yala had a principle as follows: we had to respect the differences between individuals through the use of local and national literature for them. The course should be widely open and flexible to enable students to be successful. Students feel enjoyable in searching and studying with their friends. The parents and community take part in the learning organization resulting in the enhancement of studying together and value awareness from tolerance.

### **6. Future Work**

The teaching model should be properly applied in accordance with each school's interest because of different pluralism. To enhance the teaching model to become well known, the teachers of early childhood children in Yala and other southernmost provinces of Thailand should be trained under the concept of the teaching model and follow up. Also the guardians should know about literature to enhance the tolerance of early childhood children. More importantly, those who apply the teaching model to their class must not be culturally biased. They should understand culture, language, mentality system, beliefs and values of each society. The application of the teaching model was then successful. The result of this research leads to the following research questions. The first one is the research for developing a series of literature media to enhance tolerance for early childhood children. The second one is the study on how to use the teaching model at the seam between the early childhood level and the primary level. This is because it is the way to implant the concept of

staying happily together for the early childhood level and primary level children.

## 7. Acknowledgement

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## **Session 16: Cross-disciplinary Areas of Education**

BEYOND CARING: Evoking Learners as Stimulus to Learning  
(Jesson V. Butcon)

The Relationship between Family Functioning and Alexithymia  
(Fataneh Naghavi)

New Directions in the Early Years: Introducing the New Early Years Professional in England  
(Eunice Lumsden)

Defining e-Learning  
(Tsvetomira Ivanova)

# BEYOND CARING: Evoking Learners as Stimulus to Learning

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## Abstract

*The study aimed to examine and explain the dimensions of clinical teaching gathered from the experiences of Centers of Excellence in Nursing Education. Using multiple case study approach, a qualitative inquiry was conducted among four (4) COE schools triangulating data from key informant interviews, document review and actual observations. Data from these cases were analyzed using pattern-matching logic and revealed several propositions that served to form the emergent theory of clinical teaching. BEYOND CARING – an expression of passionate and unconditional concern for learning wherein the learner serves as stimulus to the teacher and the learning environment to evoke the helping relationship in the learning process. Implications such as grounding the theory in broader context, exploring the dimensions in relation to competency development and using the theory in practice and research to eventually influence the policy environment of nursing practice in the Philippines are recommended.*

## 1. Introduction

The clinical component in the nursing curriculum has been reputed to inadequately prepare students for professional nursing [28]. While the current structure provided for a Related Learning Experience (RLE), a clinical practicum designed to actualize learned competencies through clinical teaching, the current practice is beset with overwhelming problems linked with the issue of inadequacy of the current clinical teaching pedagogy. This study attempts to evolve a grounded understanding of the features of clinical teaching to tailor a model that is not merely adopting the classroom context.

In most instances, clinical teaching occurs in the context of a fast-paced and dynamic environment, with practitioner-teachers struggling to handle the dual roles of patient care and teaching. The clinical environment on the other hand is characterized by multiple tensions caused by patient caseloads, unpredictable pace of on-going treatments, and multiple and conflicting responsibilities making clinical teaching compete with patient care concerns (Irby and Bowen as cited [8]). These complexities

posed a challenge to clinical teachers to devise an approach in teaching RLE that will create high-quality learning environment and meaningful practice.

Available literature offered general teaching framework for classroom and clinical teaching but failed to extrapolate on the dimensions encompassing the nature and context of RLE in the Philippine BSN curriculum. Moreover, while half of the BSN curriculum (around 2,500 hours) is allotted for RLE, anecdotal reports revealed that the implementation of course delivery is inadequately conducted due to lack of competent clinical teachers and poor choice or even absence of appropriate pedagogy. To a large extent, classroom pedagogy is applied in the clinical scenario considering that the context is totally different from that of a classroom simply because of the dearth in clinical teaching models developed from the curriculum of the Philippine nursing schools.

The study hopes to contribute to the existing literature by grounding an initial theory proposition on clinical teaching balancing the features and constraints in the implementation of RLE. The choice of COE schools was made on the assumption that their practices approximate to the ideal arrangements of the RLE in the curriculum.

## 2. Method

A multiple case study design was used to explore and analyze the features of clinical teaching in COE schools. Data sources were in-depth interviews, observations and document review to discover the best features and practices in clinical teaching. Participants of the interviews were deans, academic administrators, senior and junior teaching staff, and students who were interviewed separately at an average of 90 minutes per contact using an interview guide. Meanwhile, a document review form was utilized to gather data on curriculum design, evaluation tools, and learning diaries if available. Lastly, the research employed a field observation to document actual interactions observed between the clinical preceptors and the students.

Analysis employed constant comparison, a synthetic and reflective strategy to combine the actual data, empirical literature and personal accounts from the researcher's observation and



experience. To contextualize the analysis of the gathered data, a “within case” and cross-case” analysis were undertaken taking note of specific pattern-match and existence of a rival theory. The convergence of evidence was aimed at arriving to acceptable facts that are expected to result into a structured and coherent theory. Explanations of the core categories were undertaken using the triangulated data from actual sources, reviewed literature and researcher’s inferences and conceptual abstractions from the actual observations and interviews. Finally, model or paradigm formulation extracting from the refined concepts or propositions was made to arrive at a final theory.

### 3. Results

The unique roles of universities accorded with COE status are evident in their innovativeness and creativity in teaching, excellent research, pioneering ideas in curriculum, and the practice of the discipline. Being incubators of ideas, universities with COE status enjoy autonomy in terms of the schools’ operation and immunity from regulatory restrictions. These schools are considered as training hubs of the discipline and are expected to provide opportunities for catchment schools to replicate their practice and later innovate on their own.

The cases in this research demonstrated many unique approaches to clinical teaching that resulted to the schools’ outstanding performance in the Licensure Examination and as well as in the graduates’ performance in the practice of their chosen fields. These approaches are examined in-depth along the dimensions namely: curriculum and instruction, monitoring and evaluation approaches, the learning environment, the characteristics of the teachers, and the attributes of the learners.

#### 3.1. Case A

Clinical teaching practices evolved in the interviews, observations and document reviews in School A put forth eight conceptual themes that build the fundamental elements of their practice of teaching students in the clinical area.

This case of clinical teaching uses proximitized instructions characterized by having learning monitoring techniques such as close accompaniment of learners, frequent diagnosis of learning needs, and rigorous supervision. It also means prioritizing clarity of learning objectives with focused lesson plan and contextualizing instructions by using needs-based teaching, making teaching responsive to learning needs, using clinical questions, and case-based learning.

In terms of the learning activities and experiences, school A endeavored to create

opportunities to help students draw-out meaning from the caring activities through value oriented teaching that emphasizes the use of reflection and putting high premium on affective learning as well as connecting clinical learning with life experiences. Moreover, experiences created for clinical teaching were aimed at developing dexterity in role performance accomplished through mastery learning, complementary teaching, learning from one another, and learning from experts.

Learning progress was monitored using learning-oriented performance assessment done through the following: monitoring learning progress by keeping sensitivity to teaching-practice gaps, having frequent follow-through and validation activities, close supervisions of learning, collaborative monitoring, and shared evaluation practice. It is also done using learner-centered approach in monitoring such as having regular dialogues with learners, building partnerships with learners, and provision of learners’ self evaluation instruments. Monitoring in School A is likewise value-focused with affective learning closely monitored and individualized feedback is given using the learning diaries.

Teachers doing clinical teaching in School A have teaching skills that are grounded from clinical experience characterized with having aptitude for clinical teaching and appropriateness of teaching skills to the requirements of the learning venue and learners’ needs. Meanwhile, learners described in the case are those with high readiness to learn and are compatible with the role expectations.

Conducive environment for clinical teaching in School A is characterized by having culture of quality established quality regulating practices such as regular dialogue to harmonize instructions, regular curriculum enhancement, having inherent quality assurance measures, and sensitivity to teaching effectiveness. It is further characterized as an environment that observes respect for creativity by maintaining the independence of the faculty in instructional delivery as well as in doing course improvement. Lastly, organizing resources to match teaching-learning requirements by sustaining an ideal learning ratio having a variety of and a good mix of cases for learning and optimizing expanded resources from network were the features of a supportive learning environment.

#### 3.2. Case B

The clinical teaching practices of School B highlights the core themes that describe their distinctive feature as an outstanding nursing program. These themes are characterization of their unique practices in the competency development of students in the nursing program.

Clinical teaching in school B employs pedagogical treatment in instruction using singly or

in combination a variety of teaching methods such as: a) combining actual and simulated learning, b) problem-oriented teaching, c) cooperative learning, and d) research-oriented teaching. These techniques are utilized under specific conditions of learning that are meant to ensure balanced skill development opportunities done through a) master learning which means creating opportunities for skills development, using aids to rehearse skills, and rigorous practice and b) rationale assignment of learning opportunities through competency tracking and equal distribution of learning opportunities.

Learning experiences derived from clinical teaching are subjected to rigorous evaluation practices characterized as activities that are a) learner-centered evaluation techniques such as negotiation of desired clinical performance and provision of learners' self assessment instruments, b) having evaluation standard which means emphasis on cognitive and manual skills and performance estimation based on established learning objectives, and c) outcome-based evaluation using curriculum standards as benchmarks and employing realistic evaluation practices.

Meanwhile, clinical teaching in School B uses specialized teaching characterized as having teachers with characteristics of an expert nurse educator such as teaching specialty, coaching skills, and positive attitude toward teaching evaluation. Moreover, teachers are adapted to role expectations through regular retooling of teaching skills and engaging them in growth-promoting professional activities.

To sustain the high standards of performance, tedious curriculum management practices were observed under a condition of a supportive policy environment characterize as having clear and agreed upon clinical performance standards, stringent retention criteria for students, regular monitoring and evaluation practice, ensuring rich resource base for practicum and maintaining an open culture to evaluation.

Lastly, creating the learning environment that fosters a culture of champions as illustrated by School B requires sustaining a) a positive organizational and academic culture that is adaptive to change, with people agreeing on instructional standards and open to innovations and creativity, b) collaborative work relationships through support for teaching quality, and c) keeping curriculum standards that supports articulation of core values in the competency requirements. Figure 4 shows the illustration of emerged framework of clinical teaching in School B.

### 3.3. Case C

The clinical teaching practices of School C revealed five unique core themes evolved from the interviews, document review, and observations.

These practices characterize the nature of their program and the quality of school life of the nursing students in their university

Clinical teaching in School C was characterized with multiplicity in choice delivery system because it employs a combination of the following techniques: a) contextualized teaching because it done through needs-based instruction and there is complementation of classroom and RLE teaching, b) technology-mediated learning using alternative teaching tool like e-Illuminate, c) team teaching with complementation of expertise used in teaching, and d) ensuring meaningful articulation of core values in the competency requirement because of its strong emphasis on affective skills acquisition.

In School C, clinical teaching is done under rigorous learning standards observing the curriculum standards that are stringent in terms of its selection and retention process, and strong emphasis on cognitive learning.

A distinctly excellent practice in the program delivery was the involvement of wider stakeholders in the teaching-learning activities manifested by having partnership with extended stakeholders, regular appraisal of learning outcomes, and strict monitoring of performance and learning problems.

Clinical teaching based on School C's practices demonstrated the teachers' adaptation to a variety of effective teaching roles to meet the learning demands of the students. These roles were: expert resource, skills coach role models, and leaders that served to guide students in the practice of their professional responsibilities.

Finally, learning environment conducive to School C was characterized as having tedious curriculum management process created under the condition of a supportive policy environment to accomplish the continuous course review and improvement, updating of curriculum, harmonization of divergent practices in clinical teaching, and maintaining an ideal learning ratio. Figure 5 shows the emerged framework of clinical teaching in School C.

### 3.4. Case D

The clinical teaching practice of School D highlights five conceptual themes illustrative of excellent program delivery. Using their practice, the study was able to unfold dimensions suggestive of good clinical teaching.

In terms of instructional delivery, it uses competency-focused instruction characterized as a) contextualized teaching using case-based approach, b) technology-mediated, c) complementary as it employs the use of variety of expertise, and d) needs-based for it rely on continuous assessment of learning needs and difficulties and uses competency exams as bases for lesson planning.

To track performance of competency, the school employs direct and authentic competency assessment that is accomplished by having evaluation standards that provide for structures for feedback on performance, focused and cooperative evaluation, direct supervision and evaluation of learning performance, and provision of learners' self-evaluation instruments.

A distinct feature of the school's clinical teaching structure highlights the roles of teachers in keeping the standards of practice by demonstrating quality nursing performance while teaching students. Furthermore, the use of standardized teaching and evaluation practice in School D demonstrated in having standard curriculum management processes such as strong adherence to mandated curriculum, adherence to agreed learning standards, consensus on standards of course delivery, clarity and acceptance of curriculum expectations, quality improvement initiatives, and monitoring of teaching performance were contributory to the outstanding performance of their graduates.

Finally, apart from having defined structures and processes in clinical teaching, the leadership of teachers and administrators served as moderating factor to quality clinical teaching. This element in the context of school D was the core catalyst that did not only bring coordinated and team effective initiatives but also propelled more resources to sustain the mission of quality instruction. Figure 6 shows the emergent framework of clinical teaching in school D.

## **4. Discussion**

The cases in this research demonstrated many unique approaches to clinical teaching as revealed in the "within-case" and "cross-case analysis" that examined in-depth the dimensions namely: curriculum and instruction, monitoring and evaluation approaches, the learning environment, the characteristics of the teachers, and the attributes of the learners.

The subsequent discussion would include analyses of the case descriptions to extract the refined propositions that will serve to evolve the descriptive framework of clinical teaching. The discussion is threaded with empirical literature to establish the theoretical and logical connections of the propositions toward building a coherent paradigm of clinical teaching in nursing schools.

### **4.1. The Aspect of Curriculum and Pedagogy**

The design and delivery systems are two integral components in clinical teaching. To accomplish the development of core competencies, the design must clearly communicate the expected outcomes across the learning experiences in the curriculum. It should

also include meaningful activities carefully designed and threaded to elicit the competencies needed for learners to perform the expected professional roles upon completion of the program.

The bulk of the educational experience of nursing students is spent largely in the clinical areas. More than half of 4-year program is devoted to learning professional roles through actual interaction with cases guided by the clinical teachers.

The learning goal of an academic program is articulated in all dimensions of the curriculum. It is manifested in terms of its prevailing ideology, priorities and even biases in certain competencies or contents. The soft curriculum, if examined, closely would reveal not just the hidden ideologies but also the unarticulated and unintended components of the curriculum.

Having clear learning goal is a necessity in clinical teaching. The strong connection among goals, content, and pedagogy communicates a clear message to the users on what expectations are at hand [16]. Given the complexity of the clinical situations and the changes in the characteristics of the learners, Carter [4] recommended that setting and clarifying the goal of learning are essential in building strong connection between teaching and learning to make the act of teaching non-negligible.

With clear learning goals, standards and expectations are set, and instructions become clearer and easier to follow. Instruction will not only cause compliance but is also expected to result in greater autonomy and self-direction among the learners [11]. Since nursing education takes place in clinical situations where life is at stake, such that the focus of teaching must exceed beyond learning the skill to acquiring higher-order tasks; it is important to set clear learning expectations [12].

Essential to teaching is the close-match between learning needs and instruction. Determining the learners' need is important to make instruction compatible with the need. This task is easier to accomplish in the classroom than in clinical areas where there are concerns like unfamiliarity with the environment and learners' anxiety. It is imperative that creativity in the diagnosis of learning needs is employed rather than merely relying on test results, which oftentimes do not correlate with what the learners can actually perform [23].

Assessment of needs must be anchored on clear objectives and purpose or utility as Paoletti suggests that most teachers use assessment merely for grading and placement decisions rather than for planning and implementing more effective instruction [23]. Thus, clinical teaching as designed and prescribed by the curriculum must serve to reinforce learned concepts and skills and therefore be used to enhance competencies rather only to evaluate performance of skills.

Across cases, in terms of instructional approaches, the related learning component of their curriculum required *dovetailing the learners to the professional roles of the nurse* with the use of variety of methods of teaching to address the diverse learning needs of students.

In RLE, pedagogical treatment to instruction is important to enable the teacher to create more meaningful experiences that would allow the students to practice their competencies until mastery. Whether done experientially or virtually, the important component of RLE is providing opportunities for students to play the role of the professional nurse throughout their course of study.

Contextualized teaching (case-based, need-based or problem-based) using the cases attended by students in the clinical areas is the most common approach used to teach competencies for professional training. Empirical evidences showing significant competency differences noted among those who were trained using non-traditional methods of instruction have long supported this practice. Moreover, the innovativeness of teachers in clinical situations using technology-mediated approaches strengthens the intrinsic motivations of learners as their cognitive absorption increases with technology use [27], thus, making them more confident in dealing with their actual tasks with real patients in the clinical scenario. The used of combined contextual- and technology-mediated approach as seen in almost all cases included in this study and their outstanding performance in licensure examination and even job placements of graduates may indicate a strong agreement with the previous findings of several other researches.

Indeed, the role of pedagogy in clinical teaching is essentially important especially that RLE is a learning situation where the learning condition is constrained by environmental limitations (i.e. hospital policy, mix of cases, volume of students). Although, most teachers doing professional education are content experts, they are not necessarily equipped with the science of meaningful education. Thus, it is imperative for the schools to invest in re-tooling their faculty on the application of basic pedagogical treatment considering that most of them lack experience and theoretical background on teaching [15].

Essential in course delivery is the close supervision of learners to ensure that meaningful learning is taking place and is facilitated further if necessary. According to Schonwetter, closer physical proximity of instructor to students coupled with continuing communication and higher dynamics of rapport add up to the effectiveness of instruction [26]. Because the clinical settings are complex and intimidating to young learners, close accompaniment of students would not only allay anxiety but also

improve learning and increase retention based on the conclusion of the same study.

Based on the accounts of the four cases, the use of variety of techniques in delivering instruction must be aimed at achieving better learning outcome. Kim et al., [14] emphasized that opportunities to observe and practice the skill will depend largely on the creativity of instruction and delivery. But the equally important aspect is the amount of opportunity to practice the learned skills. In the nursing curriculum, emphasis is placed in learning by doing the skills through related learning experience. But due to volume of students, lack of cases, competition with other health professionals, lack of logistical requirements, and poor coordination between educational and health institutions, opportunities for students to practice their skills are diminished [16], thus resulting to poor performance when they practice nursing or pursue other work after graduation.

The amount of actual experiences one has for a given task is essential not only in building competence but also in building self-confidence. In the Philippine context, coursework must provide parallel opportunity for practice as an essential pedagogy. This is relevant especially because nursing students are not only trained to make decisions but perform those decisions as action/response to patients' problems. If opportunity for practice is scarce, then learning would be assumed to be below standard.

Effective course delivery assumes that there is an on-going assessment of needs as these are usually dynamic and changes as the learning activities unfold. Reilly's proposition about needs assessment requires teachers in the clinical area to listen carefully to learners by tuning in to their learning progress and styles [25]. In this way, effective clinical teachers are then able to interpret these needs and delineate learning problems as either "pathological" – those that needs immediate attention and "developmental" – those that can be classified as under watchful waiting.

Aside from provision of time for practice, it is also important that opportunity for reflective learning is being addressed in the learning plan. Irby and Bowen as cited by Dolmans et al argued that encouraging students to reflect can have positive effect on learning especially when these reflections are connected to the expected professional roles of the students [8]. Moreover, Reilly emphasized that in clinical teaching, it is always necessary to expose students to the ambiguity and ambivalence inherent to clinical practice so that with guided reflections, they can develop and sharpen their problem-solving skills and at the same time, imbibe values such as honesty and humility [25].

Clinical supervision or teaching is traditionally an activity used to spot errors or deviation from

practice. This concept of supervision has also evolved over the years as more empirical literature suggesting proactive approaches to address learning needs. The factor of intimidation from the preceptorial relationships in medical and allied health science education is replaced with the concept of “gentle interruptions” where teachers serve as coach and offer supportive instructions to novice practitioners [19]. This is in consonance with Reilly about the role of clinical teachers as “interventionist”- who provides for the student supplemental learning to enrich experience with an expert view and evidence-based findings [25].

Finally, the emphasis on cooperative learning and collaborative teaching recognizes the pivotal role of learners in the learning process. In cooperative teaching, learners are encouraged to work with their peers as they discover facts and develop skills while supporting each other. While collaborative teaching emphasized two things: one is recognizing that adults want to collaborate and be self-directed and the other is specialty teaching [1]. Either of these – cooperative or collaborative and learner as teacher or teachers as specialist was found significantly effective in teaching clinical skills and decision-making skills in patient care. Thus, involving learners and the entire health care team in learning is most effective especially when designed purposely to address specific needs.

#### **4.2. The Aspect of Monitoring and Evaluation Strategies in Clinical Teaching**

The overall picture of successful nursing programs in the Philippines revealed a practice of *rigorous competency supervision involving multi-stakeholders approach*. This is a clear illustration of a grounded competency-based teaching in nursing that is pioneered by the BSN program in the Philippines.

In a study by Menix, conclusive findings argued that monitoring and evaluation of learning outcome are integral and critical components of educational evaluation that should be inherent to the program as it is designed [22]. This is an important step to determine the worth, effectiveness and success of a certain program. But more than doing monitoring and evaluation of outcome, the emphasis shifts from merely checking results to progressive learning with the results through participatory evaluation [15]. The learning that takes place during evaluation and the decisions made with it provides more important insights that the outcome itself especially when done creatively and holistically. Evaluation activities must therefore endeavor to create more reflections as it encompass not just tangible results but also the intangible outcomes of the program.

Learning feedback is important in the learning process. When given timely and appropriately, it is

expected to correct skills gap while at the same time increase motivation of learners. Giving of feedback is essential in clinical teaching especially when dealing with adult learners. Unique to the experience of the subjects is the use of a variety of creative feedback mechanisms including reflections. This finding is bolstered the previous claim of Menix on the effect on skills gap and motivation of students towards learning that can be changed with feedback and guided reflections.

Because adults would generally like to involve themselves in the learning process, provision of self-assessment measures will definitely improve their performance and enable them to further enhance their skills. According to Reilly, the need for appropriate leadership in teaching medical students in the clinical area is essential and among the styles, the democratic style provided better outcomes [25]. Teaching democratically is all about activating learners’ initiative thus providing them with self-assessment tools not only brings independence but also develop a sense of accountability to their own learning.

The value of collaboration in monitoring and evaluation is already an established phenomenon as stakeholders already collaborate in the design and implementation of the program. The effort of ensuring that multiple perspectives are examined does not only bring forth cooperation, but initiates the negotiation process in learning. Based on Reilly’s observation, while clinical teacher typically lead teams of learners with different skills level, the “group tango” can be improved by collaborating with the rest of the team and enabling learners to negotiate in terms of expectations of performance and learning, therefore, making them more engaged and involved in the teaching-learning process.

A more focused and individualized approach to evaluation is necessary as every learner progress differently in the learning situations. Across the four cases, the strong practice of linking monitoring and evaluation to instructional goals were observed. In fact, most use authentic evaluation as students are assessed as they actually perform the task using valid and normed criteria. If indeed this practice is institutionalized, then the cases addressed Paoletti’s caveat that most teachers use assessment merely for grading and placement decisions rather than for planning and implementing more effective instructions [23].

Whether test-based, outcome-based or authentic in approach, what is essential is the realizing the purpose of why teachers monitor and evaluate performance. According to Melrose, providing observations and feedback to learners allows them more opportunities to grow and enjoy the learning process while responding independently or with assistance, the deficiency in the required competencies [21]. Creating a learning environment

that sets high expectations and standards of learning will not only encourage superior performance but also reward learners as they begin to acquire expertise in the roles that they play especially when the learning climate is sustained [1].

### 4.3. The Aspect of the Clinical Nurse Educators

The challenges nurse educators encounter and respond to while teaching in the clinical area require a unique set of skills and teaching expertise different from those acquired through classroom teaching. Thus, clinical teaching demands for *teachers exercising leadership in professional nursing practice*. This argument of Paton is congruent to several other literatures pointing out to experience, competence, relevant trainings and even service orientation as important characteristics [24].

Clinical teaching expertise is similarly situated as what Vajoczki described as possessing relevant skills as discipline knowledge, course organization, delivery skills, student rapport, assessment and evaluation skills, and some administrative skills [29]. This set of skills may be evident in any classroom teachers but clinical teaching context may require higher adaptability and precision given the very unpredictable clinical situations.

Meanwhile, more than experience and competence, having relevant trainings in specific area of specialization is needed [5]. This variable is known to influence skills development and satisfaction of learners greater than the non-specialized teaching staff. Specialized teachers are more equipped with content and pedagogy to easily convey instructions effectively even under stressful clinical situations.

In terms of satisfaction of learners, specific traits and personality requirements are necessary for clinical teaching to progress. Calderhead required exceptional relatedness with learners and personality described as strict, fun but caring [3]. Moreover, because clinical teaching employs simulations and modeling Egan found out those successful teachers are those with positive view of their work either as a vocation or service [9]. According to the same study, teachers with such view value their students unconditionally and make teaching culturally sensitive and effective for learners.

In addition to relational skills as an essential requisite to connect with the learners, characteristics of a coach and a mentor are also desired. The ability to diffuse skills and simplify complex tasks is in consonance with what Reilly has described that the clinical teachers must be capable of teaching in concise and clear expressions of thoughts. Effective clinical teachers recognize the difference between scientific knowledge (those with intrinsic value) and clinical knowledge (those that has value to patient

care). The task of the teacher is translating complex clinical knowledge about the cases and making decisions about them. Excellent clinical teachers show them how because students learn best when their teachers give them the bird's-eye view as teachers themselves struggle to tidy up the mess. In similar line of argument, when the learner journeys with the task of problem-solving in the clinical scenario, they perform better while their teacher shifts role from supervisors of performance to skills coach providing not only theoretical instructions but also comforting support. This process is extensively seen as the common best practice across four cases.

Lastly, while commitment to teaching and dedication to the nursing profession are strong values that clinical teachers must really imbibe, according to the literature, these are only building blocks that serve to form the foundation of leadership abilities. Reilly [25] emphasized that more than pedagogical concerns, it is the leadership of the teacher that inspires and even motivates students to achieve their performance potentials as they struggle through the fits and starts, blind alleys, and missteps in the clinical practice. Matzorou added that preceptorial skill of teacher, which is developed overtime with practice and experience with students, harnessed by leadership abilities can be a powerful tool that facilitates reflection and enhance critical thinking among learners [18].

### 4.4. The Aspect of Learners' Attributes in Clinical Teaching

The ultimate measure of outcomes of any academic program is measured through the results of its graduates. The COE schools are established institutions of higher learning with very selective admission, stringent retention policies, and high completion rate. These characteristics are attributable to the fact that these schools primarily admit students with superior learning traits. But more than intelligence or talents, it is imperative that schools enlist students possessing the traits compatible with the professional roles and attributes that would allow learners to succeed in the program. Based on the practices on the four COE schools, a successful nursing program is qualitatively correlated with the *learners' motivation as precursor to learning success*. As Yates established in his study, inclinations to specific professional practice as measured in aptitude tests have direct linear relationship with overall success later in the program or in their career but definitely are not the only factor to consider [30]. The motivations and interests of the learner developed overtime from one's life experiences may be influenced and clarified with the use of specific pedagogy of instruction that would foster reflection and appreciation of future roles [10]. This rationalizes the role of RLE as the defining

experience that allows learners to fit in the professional roles of the nurse not just as an opportunity to practice skills, but also as a venue for reflection and discernment.

Meanwhile, learners that are adaptive to rigorous training and high expectations are potentially beneficial because they serve as stimulus to effective clinical teaching. Communicating high expectations to students make them strive harder to meet expectations and eventually when they achieve their optimum performance, they can serve as a potent force that trigger the development of more appropriate strategies to clinical education. It is therefore imperative that apart from screening the right student traits, there should also be a clear goal in mind to develop the desired learning traits of students to activate their inherent role in the curriculum and in their professional training.

#### **4.5. The Aspect of Learning Environment in Clinical Teaching**

With the erratic changes in industry's demand and the lopsided curriculum management by higher authorities in the nursing education of the country, it is imperative that regular revisits and enhancements of the curriculum become the individual quality practice and accountability of universities. The challenge is clear about clinical teaching and it boils down to making the practice in nursing education relevant with the changing demographics and the worsening national and global health care situations. This concern was felt initially as the increasing mismatch of graduate competencies vis-à-vis actual needs of the industry was profusely observed and documented across the health care delivery system. Thus, streamlining the implementation of clinical teaching is of paramount importance requiring more serious work to fit the practice with the current and future context of health care demands.

The foremost concern in the learning environment is the quality of culture at which learning is expected to take place. Authorities have reached consensus regarding the importance of organizational culture that is matched with learning expectations of the program. Reflecting on the best practices and features of the four cases, the study yielded that successful nursing program is created under a condition of a *compatible organizational culture with standards of learning*. This study cannot overemphasize the role that culture plays in terms of the success and failure of any educational endeavor but this inquiry further established that when standards of learning is matched with the academic and corporate culture of the school, clinical teaching can become the mainstream pedagogy to replace tedious classroom and laboratory instruction.

But the prevailing concern in most schools is the ratio of students to teachers and students to

existing material resources. The phenomenon of high crowding in the nursing schools created the "unintentional neglect" in the other aspects of the learning environment that have strong impact in the quality of teaching and learning. Across cases, the defining characteristics of a supportive learning environment can be summed up as positive organizational and learning culture, clear standards and expectations of teaching and learning and supportive policy environment harmonizing resources, practices and standards.

In terms of organizational and learning climate, according to Beckman and Lee, creating a supportive climate is grounded on respect to foster a culture that breeds collaboration, value for diversity, openness to change and adherence to agreed norms and standards [1]. The recognition of the existence of the two distinct cultures in an academic institution is the starting point of the attitude of understanding and collaboration that is seen in most successful schools.

In a similar line of argument, collaboration is feasible when standards and expectations are clear to all stakeholders. The strong connection between the goals and content and pedagogy communicates a clear message to the users on what expectations are at hand [16]. Thus, it is imperative that educational institutions must endeavor to clarify program goals and streamline standards and practices to make these coherent with the program's expected outcome.

Meanwhile, strategic partnership with other sectors/agencies and autonomy in terms of teaching practices created the environment that fosters creativity and optimum learning not just for students but for teachers as well. These findings are in consonance with that of Beyerlein suggests on creating hopeful learning environments proposing that educators can better their work by removing structural barriers and create healthy relationships, being reflective in practice, and finding opportunities for partnership and collaboration [2]. Overall, it is in creating harmony in policies, practices and relationships towards a goal of building a community of learners that is more important about the learning environment to neutralize the complexity of today's technology-driven society.

#### **5. Emergent theory on clinical teaching – BEYOND CARING**

Clinical teaching is a learning interaction between a teacher and a learner encapsulated within a climate of caring. In between the two agents of learning are usually the patients whose condition of health create the learning milieu and serve as the unwritten syllabus of instruction. The interactions evolving from the caring activities of the nurse manifest the most spiritual learning that students and teachers alike can optimize.

The clinical teaching experiences of the four cases evolved conceptual themes descriptive of their best practices that gave birth to a theory BEYOND CARING. This theory originates from the helping relationships that nurses and patients develop in a clinical situation. As the teaching takes place with the patient, the interaction between the learner and the facilitator evoke a helping situation that resonates the professional roles of nurses. As the teacher conducts the caring activities while ushering the learner to the rudiments of the profession, the relationship given specific conditions of the environment and learning culture induces a helping relationship that transcends the usual bounds of classroom teaching. The theory BEYOND CARING means teaching as if helping the sick gets well and even better. This passionate and unconditional expression of teaching exemplifies the spiritual dimension of clinical teaching wherein the learner serves as stimulus to the teacher and its environment to evoke the helping relationship in the learning process.

The theory emerged from the five conceptual abstractions of the practices of clinical teaching in the four cases. First, clinical teaching must endeavor to perfect the dovetailing of student nurses to the professional nursing roles. This is done by maintaining intimacy in learning with teachers using variety of techniques and tools to bring across meanings and reflections of the caring activities.

Second, keeping rigorous competency supervision that engenders participation and instills discipline in learning and mastery of skills. This is accomplished by establishing clear standards of learning and performance benchmarks that is known to all.

Third, forging teachers to exercise leadership in professional nursing practice to make them active catalyst of learning transformations and tailor them to fit to the roles they are to model with the learners.

Fourth, sustaining learners' motivation to succeed in learning is a function both of instruction and the learning environment. Clinical teaching must therefore take place in a learning climate that recognizes the talent, skills, aspirations, and dreams of learners so that these will be harnessed and developed throughout the learning years.

And fifth, pursuing an organizational culture that is compatible with the standards of learning to make sure that teaching exists as a primary reason for being and the school is dedicated to offer quality learning experiences.

Fitting together these concepts and using the keywords of the elements, the theory BEYOND CARING is qualitatively associated with intimacy in learning, rigorous guidance, leadership, harnessing motivations and creating culture of champions. These concepts encompass the philosophical view of

CARING as the highest form of love and applied in teaching as the unconditional TEACHING.

## **6. Implication of Findings, Conclusion and Recommendation**

The findings of the study may be grounded to a broader context of nursing and health science education. The very nature of a case study presents a potential for generalizability as the framework and theory emerged from replication logic could be possibly applied to other situations. Primarily for education in general, the findings of this study broadens the science of pedagogy as it is applied to other contexts such as workplace and practice settings.

In nursing education, the findings have implications for the area of effective competency development. While the curriculum for nursing in the Philippines claims to be competency-based, the implementation operates within the traditional mode of instruction. The theory could trigger more innovative approaches and hopefully improve the competency training of nurses.

Finally, there is not enough research on clinical teaching as it is viewed entirely as "classroom teaching" brought in clinical situations. Grounding the findings of this case study and testing the framework of clinical teaching could pave the way for more scientific evidence and improve the theory on this area.

The outcome of the study that is a theory of clinical teaching has implications for practice of clinical instruction in particular, and the administration of nursing curriculum in general. Primarily, the practice of clinical teaching is regarded as an extension of classroom work and very little preparation is done along this line. The theory could serve as a guide in improving delivery of instruction and accomplishing the competency training of nurses.

Meanwhile, the school or program administrators in nursing could be guided by this study in as much as it presents areas of greater concern in terms of competency development and areas of improvement basing upon documented experiences of the COE schools. These findings present promising recommendations that would not only be useful to improve program delivery, but also impact the quality of educational experience for our students.

Finally, the four cases have come to fore findings that have implications for policy. National policies on health human resource management as well as regulatory policies that limit or even restrict creative educational process may be resolved with this theory when translated to specific provisions in the nursing law and the policies and guidelines for BSN program. The findings may be utilized to revisit



existing provisions that are deemed counter to effective professional competency development of nurses.

Overall, the conclusion and recommendation set above hope to connect understanding among scholars, policy-makers, and practitioners concerning competency development and clinical teaching in nursing schools.

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# The Relationship between Family Functioning and Alexithymia

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## Abstract

*The article reviews empirical studies which emphasized on the relation between family functioning and emotional intelligence and alexithymia as a set of abilities, such as conception, emotion appraisal and expression, emotion management and regulation, and utilization of emotion. The social climate of the family environment operates to affect adolescents' emotional intelligence. As emotional intelligence is acquisitive and of social origin, parents and children thus expose their emotions in an expressive way to one another, either consciously or unconsciously in their interactions. Family functioning can be in relation with both its members' emotional literacy and their better compatibility with the surrounding world. Adolescence's alexythymia overlay emotional intelligence in the field of emotion identification and to some extent, in feelings expression. Alexythymic adolescence cannot express emotions orally due to inability in feelings identification, whereas preliminary emotional abilities have specific importance because skilfulness in appraisal and quick precise expression of emotions brings about suitable compatibility in relation with environment and others. The research showed that emotional intelligence is negatively associated with alexithymia. Decreases of parent-child interaction, decrease of chances of being together, listening and positive attention in crowded families are probably some reasons of emotional intelligence decrease in such families.*

## 1. Introduction

Today, absolute recognition focus in man's psychological studies has been replaced by emotion and recognition influence and role in his/her psychic health and development. Recognizing emotions and feelings is a basis for emotional intelligence. Emotional intelligence is conceptualized to incorporate recognition and

emotion or intellectual emotion. Although psychological systems have negatively looked into emotions, the attention given to emotions and feelings can be regarded as the core and basis of psychology and one can therefore look for mental disturbances that root in emotional perturbations like fear, anxiety, and depression, alexithymia.

Recognition and emotion have always been focused on in philosophy, and later in psychological research. A century before the Christ, Pablilius stated, "rule over your feelings and do not let your feelings rule over you." For a very long period of time, emotions were regarded as non-logical modes which were imperfect and confused. Some research even indicates that emotion release is not valuable without recognition processing. Similarly, mental ruminating as to negative emotions causes depression to increase. However, is uncontrolled emotion release and rumination the only way of using emotions [29]?

Freud used free association and dream interpretation in his treatments and helped patients restate their thoughts and desires by providing an ambience free of judgment and appraisal of wisdom.

This insight towards behaviour is not only intellectual, but also a corrective emotional experience. This new experience is both the change centre and the main factor of psychotherapy. The aim of psychoanalysis is emotional reconciliation and insight creation; insight is a method to acquire emotional reconciliation. In the course of psychoanalysis, primary emphasis is placed on the clarification of emotions and feelings. Similarly, Praz [32] also emphasizes consciousness in psychoanalysis. Gestalt-therapy techniques are defined by two behavioural axes, namely "rules" and "designs." In particular, rules are effective instruments to integrate the thought and feeling of references, while designs are activities carried out by references to recognize different poles of their personality and dealing with facts [25].

Among the pioneers of family treatment, Virginia Stair was the one who had placed the highest emphasis on feelings in family. In the same vein, she paid attention on the family's daily work and emotional experiences. At the same time, she also persuaded family members to describe their feelings and notice both facial and non-verbal states of one another [27].

Considering the above information, it seems that one of the aims of psychology, consultation, and psychoanalysis is the development of patients' emotional intelligence. Considering the orientation of the recent studies in the identification and the role of emotional intelligence, as a concept different from personality and intelligence quotient IQ, a clear and comprehensive recognition of this structure is therefore achieved when the role of a family in development and its relation with emotional intelligence is specified.

Unless a society contains sound families, it cannot be claimed as healthy. On the other hand, family is a consequence or reflection of the whole society and its significant roles are obviously to transfer values, and cultural and credence heritage by word-of-mouth, while maintaining kinship relations, raising and training generations, supplying basic human needs, as well as creating emotional and psychic balance among the members [10]. Nonetheless, the internal procedures of the people are not entirely internal; they are rather influenced by external factors which mutually affect each other.

The family has the highest effect on individuals and it can mould their behaviours at any moment. A behaviour which is created in relation to other family members is not limited to a normal agreeable behaviour. The family can form abnormal behaviours, too [24].

The role of a family's performance in shaping an individual's behaviour, personality, and development of his different talents is important. Researchers studying behavioural sciences call a suitable environment an orchard and an unsuitable environment, a cemetery of talents. Do children whose parents provide suitable environments for them have higher emotional intelligence? Do children whose parents show their emotions to each other and their kids improperly not understand each other, or the opposite side's emotions, behave in the same way?

In general, children's situation in a family (e.g. their genre and number, birth order, relation with their age group or other relatives) and cultural and economic factors influence the formation of their personality [20].

In addition, the treatment by parents to their children and how they react to their interests and activities, as well as kids' treatment to one another, emotion and information exchange among them, emotional protection to one another, and the relationships of the family members with outsiders may also influence children's emotional intelligence.

This paper is a literature review of several past research conducted on the role of family functioning in emotional intelligence and alexithymia. The article is divided into several sections. The review is started with the definition of family functioning, and this is followed by a review on the family, as well as the effects and interaction of family functioning. Then, an overview of the paper is included and a demonstration of the influence of family functioning on alexithymia is also given.

## 2. Family Functioning

A family is a natural group formed by the marriage of two persons. Minuchin [22] considers family as a social unit facing a chain of developmental tasks. These tasks change in parallel with the parameters of cultural differences, but their origins are worldwide. Family is a unit whose members can not be considered separated from each other, and its member composition has an action beyond the behaviour and role of each member.

Meanwhile, Navabinejad [25] considers family as a small group comprising of persons who are associated with one another through marriage or blood relations, living together in a specific unit, and sharing common cultural experiences. They are emotionally tied to one another by common goals and tendencies.

According to Walsh [46], "complexities caused by the effects and interaction of different factors in the formation of family concept and nature in cultures make it difficult to define family functioning." Family functioning refers to performing the functions of the family and the patterns of the relationships which connect members of a family system. There are different patterns of relationships, and these include patterns for showing affection, and for solving problems encountered in performing daily tasks [22].

Najarian [24] mentioned that family functioning includes a set of tasks, roles, and expectations members of a family have on one another. Stair and Baldwin [38] used to notice family members' emotions and got involved in

their daily work and emotional experiences in the family. She, enjoying specific skills in establishing communications, transferred the same to family members. As an example, she pointed out effective communication in the family (e.g. the use of personal pronoun and expressing your feelings). Family members should have the same level like authoritative family, while their facial state, physical status and voice should be harmonious. Stair also specified five communicative styles in families; these are tranquilizer is weak and cautious, reproacher blames others, overwise and chilly is calm and unemotional, apathetic makes others out of their senses, and does nothing to family affairs, and communicator expresses his/her views and feelings honestly and easily [26].

A family needs several methods to control the behaviour of its members. McMaster identified four of such methods, as stated below:

- Rigid; in such families, members' routine roles and tasks are clear and predictable. These families cannot adapt to changes due to rigidity and inflexibility, and they may even not have the power to accommodate to changes that the family faces in each development stage. The penal ambience of such families probably directs its members towards hidden aggressive destructive behaviours and fight to gain power in the family raises; members also may exhibit their rage outside the family environment. As mentioned, predictability of these families is high but their constructiveness is rather low.
- Flexible; the behaviour of families taking advantage from these methods is both predictable and constructive. They can suitably adapt themselves with new adaptation conditions. The educational and supportive method of the family may encourage them in their activities and adaptation to family regulations.
- Unrestricted; this method is somewhat predictable but its constructional power is low. Organization and practice have been replaced by inertia. Members do not fulfil their tasks well and have problems with one another in identifying their roles. Weakness of organization in such families results in a sense of insecurity in kids, and they may exhibit love-asking behaviour. These kids are somewhat undisciplined and they face problems when they enter school, since there are governed regulations and children are expected to have standard behaviour.
- Anarchic; in this method, both predictability and constructiveness are weak. It is

occasionally unrestricted and flexible, making it predictable so that no member knows what to expect. The most effective way of controlling behaviour is the flexible method and the most ineffective way is the anarchic one [21].

### 3. Definition of Alexithymia

*Alexithymia* is an emotional-cognitive confusion, trait of which is disability in feelings expression and distinction between different emotional states and the limited ability of thinking about emotions and their applications when facing stressful situations [30].

The concept of alexithymia is taken from clinical observations on patients who made weak responses to insight-oriented psychotherapy.

Ruesch [33] detected a cluster of personality variables in a subset of his patients by studying those who were experiencing psychophysical disorders. They tended to establish dependant relations and it seemed that they were immature and uncreative with their thinking and that they tended to use physical actions to express emotion. Horne [12] and Kelman [16] described later a similar set of personality variables in a group of patients who made weak responses to insight-oriented psychotherapy. In fact, Horne believed that psychotherapy resulted in more disappointment and depression in his patients. He considered as reason emotional unawareness, least interest, internal experiences, minimum tendency to dreaming, objective acquirement of thought, and externalized lifestyle in which behaviour is directed by others' rules, regulations and expectations, not by feelings, dreams and personal values. These psychiatric patients believed in creating psychophysical effects and they often were captured by extremist behaviours such as alcohol misuse and gorging to regulate internal confusions.

The importance of these preliminary clinical observations was noticed deeply when two decades later Sifenus [43] and Nemiah [28] studied the personality characters of patients with psychophysical diseases such as ulcer, asthma, hypertension, rheumatism, colitis, etc. the results of these studies showed that many of such patients had much problems with understanding and describing their internal mental states. Sifenus [44] made the term 'alexithymia' to identify specific cognitive and affective characters observed in his patients. Alexithymia is a Greek word where 'a' means lack, 'lexis' means word, and 'thymos' means emotion. It has been defined as a structure including:

- Problem with identifying others' feelings and with distinguishing between feelings and feelings of emotional stimulation.
- Problem with describing one's feelings before others.
- Limited imaginary procedures.
- Stimulus-bound and externally-oriented cognitive styles.

There are several characters having significant clinical results, and associated with alexithymia (although these characters are not regarded as part of the definition of this structure): problems related to identifying others' emotions in their facial states Lane et al., [17], Parker, Taylor, Bagby, [30], limited ability to express empathy for others' emotional states (Christle [6], Nemiah, Freyberger and Sifenus [27]). Recent empirical evidences show that dream quality is associated with alexithymia, not with the ability to recall dreams. When people with alexithymia recall their dreams, these include clear mental content (e.g. scenes of violation) or review rather unimportant daily experiences. Christle [6] reported that dreams activation in patients with alexithymia is very difficult because their limited imaginary abilities restrict their ability to change negative temperamental moods through dreaming or other mental activities [9].

People stricken with alexithymia make the imagination in others that they are different, strangers from an entirely different world living in the heart of a society under feelings rule. For example, such patients scarcely weep and if they do that, tear a lot and if they are asked why, they get confused. It is not true that patients with alexithymia never have feeling, but they cannot identify their feelings accurately and express them in words. They are completely deprived of emotional intelligence basic skill i.e. emotional self-awareness [6].

#### 4. Family Functioning and Alexithymia

Lumley, Mader, Gramzow, Pepineau [18] studied the family and parental correlations of alexithymia in a research titled "*Family factors associated with alexithymia*". In this research, composed of two parts, the relation between cognitive and emotional characteristics of alexithymia and family malfunctioning and mothers' alexithymia was studied. In the first part, 127 young people were assessed by alexithymia scale (TAS-20). To assess impaired imagination, Cohen's Scored Archetypal Test with nine factors

was used and FAD instrument was applied to assess family malfunctioning. In the second part, 80 of their mothers filled out TAS-20 about themselves. The correlation of mothers' alexithymia characteristics were studied by the same characteristics in their children. The results showed that overall family pathology is associated with alexithymia. Difficulty in identifying feelings was associated with the affective involvement of a malfunctioning family, thinking with external orientation and partial control of family behaviour, and defective imagination with inefficiency in solving family problems. In the second part, mothers' alexithymia characteristics had a meaningful correlation with children's alexithymia. This finding shows confused family functioning and mothers' alexithymia in generating children's alexithymia characteristics.

King and Mallin Ckrodt [15] studied and compared the family factors of alexithymia in a research titled "*Family ambience and alexithymia in patients and others*". In this study, Toronto Alexithymia Scale was used to assess alexithymia and retrospective ratings of family malfunctioning were measured by Family Structure Scale. Patients showed higher meaningful family malfunctioning and reported higher tendency to alexithymia. Alexithymia had a positive relation with retrospective reports of family functioning, reverse role of parent-child, and fear of isolation.

Berenbaum and James [2] studied the relation between alexithymia and family ambience in their research titled "*Associates and retrospective history of alexithymia*". This research was carried out on college students and the findings showed that higher degrees of alexithymia had a meaningful correlation with decreased expression in the family and lower emotional security feeling in childhood.

#### 5. Conclusion

Based on the literature review, it can therefore be concluded that emotional intelligence has been put forward for about two decades and many related studies have been carried out to study it. It is also understood from the previous studies that emotional intelligence is associated with factors such as life satisfaction, adaptability, optimism, overall intelligence, personality, and emotional disorders like alexithymia, depression, and anxiety. In addition, previous studies have also shown that girls are higher than boys in their emotional intelligence, but high emotional intelligence in boys is a better predictor for achievement. Research orientation has mostly

been done towards clarifying and expanding the concept of emotional intelligence. In particular, a few studies have been carried out on the role of family functioning in alexithymia. Nevertheless, most research has implicitly studied the role of family and its functioning in factors and features based on which emotional intelligence has been conceptualized.

According to these studies, family is the first emotional education station, while parents and their observers are the first persons playing a role. In other words, this research studied the relation between family functioning and emotional intelligence so as to develop and expand the concept of emotional intelligence in the family. How parents treat their children and how they react towards their interests and activities, as well as children's treatment to one another, emotion and information exchange among them, emotional protection to one another, and the family members' relationship with the people outside their family relations may influence the emotional intelligence of children.

Thus, it seems that emotional intelligence is negatively associated with alexithymia. According to results of studies, there is a meaningful negative correlation between emotional intelligence and alexithymia and the existence of negative relation between emotional intelligence and alexithymia is acknowledged i.e. as emotional intelligence increases, alexithymia decreases and vice versa. These findings conform to results obtained by Akimoto and Ferkonishi [1] those who get high scores in alexithymia are weaker able to identify emotions by facial states and display weak empathy because they cannot understand and assess others' emotions [42]. It seems that people struck with alexithymia are very weak in emotional self-consciousness and emotion expression based on emotional intelligence. Findings of showed that there is a meaningful correlation between family functioning and alexithymia. In other words, as family functioning scores increase (inefficiency), alexithymia increases, too and vice versa. These results conform to Lumely and his colleagues' studies on the existence of a meaningful relation between general family pathology (inefficiency) and alexithymia, King and Malin Krot's research [11], and Beren Baum and James' [3] study on a meaningful correlation between high extent of alexithymia and decrease of expression in the family and lower affective security feeling in childhood.

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# **New Directions in the Early Years: Introducing the New Early Years Professional in England**

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## **Abstract**

*In March 2006 the British Government introduced a new professional, the Early Years Professional with status (EYPS). It is being presented as the 'Gold Standard' in early years and every full time day-care setting should have an Early Years Professional by 2015. The last four years have seen intense activity to develop frameworks to support the EYPS 'production line' and there are now five training routes. This paper aims to disseminate the challenges of establishing a new professional. It will specifically report on ongoing doctoral research into the development a new professional identity with a specific focus on the 'pilot phase'. A mixed methods methodology has been employed to ascertain the views of the respondents after the assessment and a year later. It concludes that the introduction has had a mixed response, especially because of the alignment with teaching. However the research data provides insight into the emerging professional differences.*

## **1. Introduction**

Traditionally professions in England have developed along a separatist rather than an integrated model of service delivery. Each profession has their own 'professional identity' which shapes and impacts on the services provided. This separatist nature of professional development is also reflected in the way services for children and families have developed. Despite a historical perspective, which highlighted the importance of services being developed around the child health, education and social care professions have developed separately [1],[2].

Regardless of this separatist development the need for multi-professional collaboration across health, social care and educational boundaries has been integral to British social policy, though child death enquiries continue to highlight the failure of professionals working together [3]. The Every Child

Matters agenda which is dictating the development of services for children and their families, clearly recognises the need to improve all aspects of multi-professional working [4]. Indeed, the development of a new workforce strategy, with professionals sharing core competences is one of the challenges facing all levels of training [5].

One of the responses to this direction of travel has been the introduction of the Early Years Professional (EYP). This is an unprecedented development for those who work with children from birth to five. A new multi-disciplinary professional role introduced at graduate level, rather than grown organically and enshrined in legislation, the Childcare Act, 2006 [6]. Responsibility for the Early Years Professional Status (EYPS) training pathways has been assigned to the Children's Workforce Development Council (CWDC). This new professional in England is being presented as the 'Gold Standard' in early years and every full time day-care setting should have an EYP by 2015 and every children centre by 2010.

There are five routes to EYPS, validation, short, long, full and the latest undergraduate pathway introduced in September 2009 [7]. The overly prescribed, formulaic, labour intensive and subsequently expensive assessment process was devised by consultants, with candidates having to evidence the EYPS standards. Candidates are allocated a mentor and undertake four days preparation and a half day assessment of need, where a range of observed activities are undertaken and are given formative feedback to support their final setting visit. This visit comprises of an analysis of written tasks, a setting tour and interviews with witnesses and the candidate. Secrecy rather than openness prevails. A declaration has to be signed that candidates will not discuss the content of the assessment day with others and the assessor cannot discuss the outcome of the setting visit with the candidate. Furthermore they have to wait several months for their results whilst a lengthy internal and national moderation process takes place.

Not surprisingly the development has produced considerable debate in the early years community and beyond about the EYP role, salary levels, positioning with other professionals in early years especially the early years teacher and the assessment process. Hence the last four years has seen intense activity developing frameworks to support the EYPS 'production line' and they are now beginning to lead practice in the early years.

The speed of the expansion has inevitably made it difficult to undertake and disseminate evidenced based research to support the ongoing development of the role. This paper aims to address this situation by reporting on the first phase of a longitudinal research project which explores the concept of professional identity through a critique of the concept, implementation and impact of EYPS as a new professional model. It is particularly concerned with the research that took place between 2007 and 2009 with candidates in the 'pilot phase' of the implementation of the EYPS in the East Midland region of England. The 'pilot' aimed to test out the assessment process for the status that was delivered by an uneasy mix of eleven academic and private providers. Questionnaires and case study interviews were undertaken at the end of the EYPS assessment and one year after the award.

## 2. Literature Review

The election of the New Labour Government in 1997 saw the traditional distinction between education and care in the early years being addressed with a raft of policy initiatives [8]. Indeed, there are not many times when government initiatives are as welcomed as those aimed at raising quality in the early years [9]. The Labour Government mantra as they introduced the National Childcare Strategy was 'Good quality, affordable childcare for children aged 0-14 in every neighborhood,' [10]. Underpinning this change was the formal acceptance of what earlier early years pioneers had argued for, that early intervention would improve outcomes for the whole of society.

The early years reform agenda is part of wider changes in services that have led to structural changes in the provision of services for children and families with greater focus on multi-professional working. The changes were impacted upon by the death of Victoria Climbié in 2001 and the subsequent Laming Inquiry [11]. The recommendations of the inquiry led to a radical reform agenda for children's services and the publication of Every Child Matters Green Paper [12]. This agenda included five outcomes for all children. They are: stay safe, be

healthy, enjoy and achieve economic well-being and contribute to society.

The Children Act 2004 [13] provides the legal framework for these outcomes. It underpins the drive to improve services through multi-agency working and an integrated approach to care and education services. Each local authority had to appoint a Director of Children's Services responsible for education and social care. In addition the CWDC was established to overview workforce reform. The government had also confirmed their commitment to support care as well as education by launching 'A Ten Year Strategy for Childcare' as part of the pre-budget report in 2004 [14].

Alongside developments in England, the international context for integrated Early Childhood Education and Care was also the focus of ongoing work by the Organisation for Economic Co-operation and Development [15]. Meanwhile, evidence from a large scale study, the Effective Provision of Pre-school Education (EPPE) [16] reported that better outcomes for children in early years care and education settings were linked to higher levels of staff qualification. These findings further supported the government agenda for change and 2006 saw the Childcare Act [17] finally removing the distinction between education and care for children under five years old, paving the way for the new statutory Early Years Foundation Stage [18] covering the birth to five age range.

It also introduced EYPS, which was presented as being broadly equivalent to Qualified Teacher Status (QTS). EYP development is pivotal to raising standards in early years practice, particularly in the private, voluntary and independent sector. The routes for gaining EYPS are varied and a critique of the concept, implementation and impact of EYPS as a new multi-disciplinary professional model is vital to future policy developments in England.

## 3. Professional Identity

The discussion about what is a profession, issues of professionalisation, professionalism and professional identity are complex, multi-layered and constantly evolving. Whilst it can be argued that a tacit understanding is held by all, because professions are an integral part of society, actually deconstructing 'what is a profession?' is challenging. Indeed constructing a definition continues to be the focus of academic debate about what makes one employment group so different from another that it is afforded greater status, privileges and power? [19], [20], [21].

Professions traditionally are seen as having expertise, in their specific area with the professionals

of the nineteenth century being predominantly male, independent and unsupervised [22], whereas contemporary professionals tend to work in organisations and are no longer dominated by men. However, access by women still evidences inequalities, both in numbers and pay structures [23].

It appears more appropriate to view the professions in the 21<sup>st</sup> Century as fluid entities that have a range of characteristics, such as qualifications, specific training, registration and knowledge and skills related to their loci of practice. Additionally, professions have an ecological dimension that is impacted on by individual, organisational and state interventions. There are also a range of processes which take place to make an individual part of their professional group, evidence their professionalism and make them distinct from other professions, occupations and lay people. Both the personal and the collective shape understanding of the professions and there are vocational and motivational factors that support individuals in making particular professional pathways choices.

In relation to the area of professional identity, Dobrow and Higgins [24] review the work of Ibarra (1999<sup>1</sup>) and Schein (1978) and suggested that professional identity is 'relatively stable and enduring constellation of attributes, beliefs, values, motives and experiences.' This definition implies stability and does not acknowledge individual change, the place of either reflective practice, or the impact of other relationships on the professional. However, in trying to tease out what are the specific ingredients of how professional identity is developed, Adams et al. [25] suggest a commonality of 'attitudes, values, knowledge, beliefs and skills' but the way these are visualised depends on the individual professional. Forde et al. [26] concurs with this but also identifies the importance of individual agency being context dependent.

Professional communication was added to the debate by Faber [27]. His review of the literature identified three common factors emerging about professional writings that contribute to an understanding of professional identity. Firstly, they present work for a specific audience, secondly there is a wider social responsibility and finally processes that protect them as owners of knowledge in their field. This provides an interesting perspective about the owners of knowledge. Traditionally professions have put in place entry procedures and regulations about membership. The development of new professional identities, such as the EYP, challenges this. Integrated professions need to draw on the knowledge areas of other established professions to develop their own distinct loci of practice and a

professional identity that is clearly recognised by themselves and others.

The EYP also provides opportunity to critique professional dominance and the consequences of introducing a professional group that reflects an integrated rather than a separatist model of professional development. Furthermore, the present roles of the EYP as leading and supporting others in relation to the Early Years Foundation Stage are clearly laid down by the government but there is no monitoring of standards through affiliation to a specific professional body. Whilst this is one area that currently divides the EYP from other professions, it is important to recognise that registration procedures have evolved over time when increased regulation was required and the need for accountability acknowledged.

The new professional in early years has also been given 'Status' which implies it can be removed as evidenced in other professions. However the systems for ensuring regulation of the EYP have still to be established. If they are to take their place alongside the growing number of other professions working with children and families then arguably they need to mirror the regulatory requirements that these professions are subject to. This includes the importance of continual professional development and whilst the government has not yet placed this requirement on the EYP it has made provision for a support system which includes local support groups.

#### **4. Multi-professional Working**

The last thirty years has seen a steady growth of policy initiatives, internationally, nationally and locally that underpin the current policy drive for more effective integrated services and multi-professional working. There is a growing interest in research and the growth in literature documenting the challenges and benefits of multi-professional practice to meet the diverse health, social care and education needs of the community more effectively [28][29].

Despite the policy initiatives and research [30] evidencing the importance of multi-professional working, legislation and policy in England has failed to ensure that multi-professional collaboration is working effectively in meeting the needs of children and their families. The death of Victoria Climbié in 2001 highlighted massive system failure and the resulting policy document *Every Child Matters: Change for Children* [31] is underpinning a plethora of policy initiatives for children, young people and families. Integral to these is a highly trained workforce, which includes the EYP. They should have education, health and social care central to their practice. However achieving this balance in the

standards for the EYP proved challenging. The draft standards produced by CWDC in 2006 failed to capture the essence of a generic worker, with a bias towards education [32].

## 5. Analysis of Findings

### 5.1. Sample

Sixty-two candidates took part in the pilot phase of the EYPS with fifty-four successfully completing it. Thirty responded to the questionnaires and five took part in case study interviews. Ninety percent were aged thirty to fifty-nine and they were all female. They also had some unique background characteristics reflecting both the vast array of roles that exist in early years and the fact that the pilot phase was mainly completed by those in senior positions. Indeed, eighty-seven percent worked in leadership, managerial and early years advisory roles. Twenty-five were already qualified teachers and seventeen had a degree in Early Childhood Studies.

It could be argued that the employment roles of participants did not reflect the government agenda of 'up skilling' the workforce [33]. However, there are a number of possible reasons for this. For instance, early years advisors indicated that they completed the status in order to effectively support others in the sector accessing EYP and to contribute to the development of the new professional role. For others who owned or managed their own nurseries it was, as one candidate stated "...to protect my own nursery, as I could not afford to employ an EYP."

Additionally, whilst it is important not to underestimate the valuable role of 'practice wisdom' one of the interesting findings was, that despite the lead positions held by the majority of the respondents, only twenty percent had accessed a post graduate qualification, half of these (ten percent) had undertaken a post graduate teaching qualification and the other half (ten percent) had completed a master's degree. Thus for some of the respondents the opportunity to complete the status had supported their own development. Seventy-three percent indicated that it had encouraged reflection on their practice and as one respondent stated "*It was a good experience to evaluate my own position, strengths and weaknesses.*" Furthermore, twenty-seven percent indicated that completing EYPS had motivated them to pursue further qualifications.

### 5.2. Early Years Professional Status

Candidates were asked whether they thought the

introduction of the new status was a positive step forward. Seventy-four percent agreed, however only forty-seven percent would complete the course again. One reason given was that the status had variable relevance to their current role in the early years sector. One respondent stated "*I think EYPS is difficult for people in an advisory capacity not based in a setting*" and another "*that is difficult for child minders.*" Sixty-four percent believed it would lead to a more skilled workforce concurring with current policy initiative and thirteen percent disagreed.

Given the importance of time in embedding new policy initiatives concern was expressed about the long term stability of the EYPS especially what would happen if there was a change of government and the longer term financial implications. One participant stated: "*I feel strongly that the government will not achieve their aims...there is simply not enough money in the sector to attract good level 2 and 3 candidates in the numbers required. Investing in the top will not solve the very real problems faced by the day care managers when trying to provide quality experiences for children.*" For others there was real feeling that experiences workers who did not have the qualifications or did not want to undertake further study were being overlooked. This concurs with the 'Grandmother Principle' which would formally recognise this group, advocated by Hevey et al. [34].

The case study interviews have evidenced that perceptions of the EYP within the sector have begun to be impacted upon. A respondent was really pleased that: "*colleagues [are] very positive really...it raises the profile of the work they do.*" Another highlighted that those she worked with were positive about her qualifications "*...but parents do not know what they really mean.*" This reflects one of the challenges faced by the implementation of the EYP role as the CWDC have not publicised the introduction to the general public. There is increased marketing in the early years sector, however as one interviewee pointed out: "*I am constantly having to explain what it is even to people within the early years.*" She added that despite this lack of understanding she believed her setting and colleagues valued her achieving EYPS and the impact it had on her personally and professionally.

There were mixed and some emotive feelings expressed about the pay scales and the relationship with teaching, with forty-three percent indicating that the EYP should be paid the same as teachers. One respondent argued "*It is about time early years practitioners received professional and financial credit for the valuable work they do...which are the most important years to invest in.*" Another respondent indicated "*I feel strongly that this*

*qualification could divide education...an EYP does not have to show competence with managing a large group of children, they do not have to complete a probationary year and are not equivalent to QTS.”* However, forty percent disagreed with this, indeed sixty-seven percent believed that they would never be seen the same as teachers whereas only ten percent did. Those who did not see it as equal were all qualified teachers as one respondent argued: *“I know it is meant to be the same sort of level but I mean I spent four years obtaining my B Ed...if their [EYPS candidates] degree isn’t childcare related I don’t think they have the same sort of experiences as people who have QTS.”*

What these respondents evidence from their respective positions is that the promotion of the EYP by the CWDC as being ‘broadly equivalent to QTS’ has been problematic. The early stages of the introduction of this new professional role meant that those undertaking the status did equate EYP with the early years teacher when actually the EYP should have an inter-disciplinary knowledge base and a holistic understanding of the child.

The case study interviews, undertaken a year after achieving the status, provide insight into the emerging differences between the EYP and an early years teacher. These included knowledge and understanding of birth to three, in-depth understanding about child development, working multi-professionally, greater participation in team working, wider partnership with the family and leading and supporting others in developing quality services. As one of the case study respondents stated: *“Early Years Professionals have a wealth of experience with the under threes, which teachers do not but they have expertise in learning and the curriculum, they complement each other.”*

### **5.3. Assessment Process**

There were mixed messages about how the candidates viewed the assessment process with eighty-three percent of the respondents indicating that the preparation session were supportive but only forty percent found the needs assessment useful and whilst, sixty percent had found the assessment process too prescribed, sixty-six percent indicated that it was appropriately rigorous and ninety-three percent welcomed the use of witnesses. However, the setting visit has no opportunity for a professional dialogue with the candidate and seventy-seven percent of the respondents indicated that this would be a useful dimension to the process. Aligned with some other professions, ninety three percent believed there should be an accredited continual professional

development framework. Sixty-three percent of respondents agreed the mentor role was useful.

## **6. Contribution to Knowledge**

This research supports understanding of the challenges of embedding a new professional role that does not have a strong historical and evolutionary heritage. The respondents provide base line data to chart how the characteristics of candidates changes over time, the development of professional attributes, how a new professional identity evolves and the relationship with the early years teacher. It also provides a framework to evaluate changing perceptions of the EYP and insight into the assessment process. Finally data has been generated to evaluate how the EYP impacts on quality in the early years and ultimately on the wellbeing of children.

## **7. Conclusion**

The EYP is an emerging role in England and research into the development is embryonic. It has been introduced to address the need for enhanced quality in the early years, which is part of a wider strategy to radically improve outcomes for all children. This has been fuelled by research evidence, international perspectives, child death inquiries and the policy drivers of the Labour Party aimed at social inclusion and the eradication of poverty by 2020.

It is important to acknowledge that a ‘quick fix’ to the challenges faced is not possible and the long term impact of the change agenda will take decades to be fully realised, if ever. It will be impacted upon by a range of factors including a shift in practice, a more skilled workforce, greater understanding of different professional roles and increased partnership with children and families. Furthermore the agenda is politically sensitive and will be influenced the political ideology of whichever political party is in power.

This research project specifically provides base line data to evaluate the development of the EYP and support a richer understanding of the chronological evolution of a new profession imposed by the British Government. The data gathered from questionnaires and case study interviews has provided the opportunity to gain greater insight in to the early development of the EYP role. It is clear that the introduction has been problematic and challenging especially because of the alignment with teaching. Furthermore, the pilot group had distinct characteristics which meant for many, EYPS added nothing to their everyday professional roles. For others the opportunity to reflect on their practice had

been beneficial and had served to reinforce their knowledge, understanding, skills and confidence in their practice. It has also provided emerging data to support an understanding of the difference between an EYP and an early year's teacher that supports the need for both professional roles in the early years

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# Defining e-Learning

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## Abstract

*Over time e-learning has been defined in several ways - from an umbrella term for technology enhanced learning methods to more inclusive definitions such as 'more than technology. For the purpose of the analysis in this paper, the author summarizes existing definitions of e-learning captured from various sources - dictionaries, definitions by researchers, definitions by e-learning manufacturers and merchants, various definitions published on the Internet, etc. The main goals of the paper are to trace the origin and spelling of the term 'e-learning'; to follow the development of e-learning from an umbrella term to a learning method; to analyze e-learning definitions; to cover e-learning history and contemporary trends; to create an e-learning definition.*

## 1. Introduction

Finding a 'correct' way to spell the term 'e-learning' is as complicated as creating a holistic definition. Some examples are: 'E-Learning', 'eLearning', 'e'Learning', 'elearning', 'e-Learning'.

In this paper the author uses the spelling 'e-learning'. In addition to being a widely used spelling, the hyphen expresses the inextricable link and the small letters - the equality between 'electronic' and 'learning'.

The main goal of the author is to reach a definition that can be used as a holistic approach to define e-learning. That definition is based on research of definitions and alignment of strong key term created contexts as well as history and contemporary trends in e-learning.

## 2. Development of e-learning from an umbrella term to a learning method

Although widely and rapidly adopted as an umbrella term for technology delivered learning, it was difficult for people to understand e-learning in the absence of a more precise definition. E-learning development has been affected by certain factors that during the last ten to fifteen years have themselves changed drastically, thus making it difficult to create a common definition. These factors are:

- Emergence of the Internet and the revolutionary impact of networking technology
- Rapid development of IT
- New ways of social communication and their impact on people's lives

E-learning definitions include different points of view on e-learning functions. E-learning definitions closely follow e-learning development – from a broad term for technology enhanced learning to the 'social dynamics of networking' [4].

## 3. Analysis of e-learning definitions

For the purpose of the analysis, the author summarizes existing definitions of e-learning. The definitions used in this analysis are captured from various sources - dictionaries, definitions by researchers, definitions by e-learning manufacturers and merchants, and various definitions published on the Internet.

### 3.1. Chronological analysis

The chronological analysis includes e-learning definitions according to the stage of its development. The author makes her analysis by examining the main factors that have affected e-learning development through the years.

#### 3.1.1. Emergence of the Internet and revolutionary impact of networking technology.

In the late 1990s, during the initial period of euphoria after the emergence of the Internet, e-learning definitions were mainly focused on delivery via the Internet. This was the age of Internet-enabled instruction. Terms like 'the Internet', 'web-based' and 'network delivered' were the foundation of the definitions. Some examples follow:

- 'eLearning / E-Learning - learning that is accomplished over the Internet, a computer network, via CD-ROM, interactive TV, or satellite broadcast.' (World Wide Learn, 1999)
- 'eLearning / e-Learning - Any learning that utilizes a network (LAN, WAN or Internet) for delivery, interaction, or facilitation. This would include distributed learning, distance learning (other than pure correspondence), CBT delivered over a network, and WBT. Can be synchronous, asynchronous, instructor-led or computer-based or a combination.'

- ‘An umbrella term that is used for providing computer instruction (courseware) online over the public Internet, private distance learning networks, or in-house via an intranet.’ (WSL - Weizman Software Localization)

E-learning concepts during this period were network utilization oriented and focused on the potential for content storage and distribution

**3.1.2. Rapid development of IT.** In the early 2000s specialists started expressing the opinion that merely uploading content on to the web could not be defined as e-learning. ‘People in the field of e-learning began to realize that you simply cannot put information on the web without a learning strategy for the users’ [3]. Therefore, new elements, such as supporting technologies and methodologies, were introduced to e-learning and they were clearly reflected in the definitions of that period. Examples are:

- ‘Learning that is enabled by the use of digital tools and content. Usually involving interactivity between the learner and their teacher or peers and often via the web.’ [19]
- ‘E-Learning means the delivery of learning with the assistance of interactive, electronic technology, whether offline or online.’ (Institute of IT Training: e-Learning Standards,)

The definitions included terms such as ‘online collaboration’, ‘assisted learning’, and ‘interactive learning environments’.

**3.1.3. The new ways of social communication and their impact on people’s lives.** Technologies not only accelerate the flow of information, not only make it easier for processing and usage, but through new platforms change the way people communicate. Learning plays an important role in the world’s transition from Industrial to the Information Age. Economy is knowledge-based and knowledge is one of its main capitals. ‘E-Learning is not simply about technology, it is about a new social network to support learning’ [4].

- ‘The delivery of individualized, comprehensive, dynamic learning content in real time, aiding the development of communities of knowledge, linking learners and practitioners with experts’ [14].
- ‘e-Learning can be used to deliver online courses and/or establish online learning communities. It supports flexible learning

anywhere, anytime for anyone. Web-based training (e-Learning) allows instructors to update lessons and materials while CD-ROM based training caters for people who don't have internet access. These two e-Learning delivery methods provide students with interactive, cost-effective training.’ (Queensland Media Group PTY LTD)

The above definitions clearly reflect social dynamics, social relationships and cultural change.

### 3.2. Definitions Trends

Through qualitative analysis, the author tries to find the ideas behind the definitions and thus summarize her findings. The analysis indicates several trends that mark the influences of various participants in e-learning theory and practice and help the author build up a holistic e-learning definition.

- Umbrella term – definitions that describe, encompass or embody processes happening under its ‘umbrella’.
- In some definitions e-learning equals web-based training, online training or older forms of training which narrow its scope.
- Although there is no single definition for e-learning, a lot of key terms are continually repeated no matter the sector of application or source of definitions – ‘learning’, ‘electronic’ etc.
- Definitions created by scholars are the most precise since they are based on thorough analysis and research.
- Definitions created by e-learning manufacturers and retailers are often incomplete or relate to the product’s main asset.

Most e-learning definitions are influenced by the above mentioned trends, making these e-learning definitions incomplete.

## 4. History and contemporary trends

E-learning emerged from a combination of theoretical, technical and economic factors. For example, educational content, learning methodology and communication enabled by technology, all linked to a certain educational goal, constitute e-learning. There are moments in history which are critical prerequisites for the emerging of e-learning:

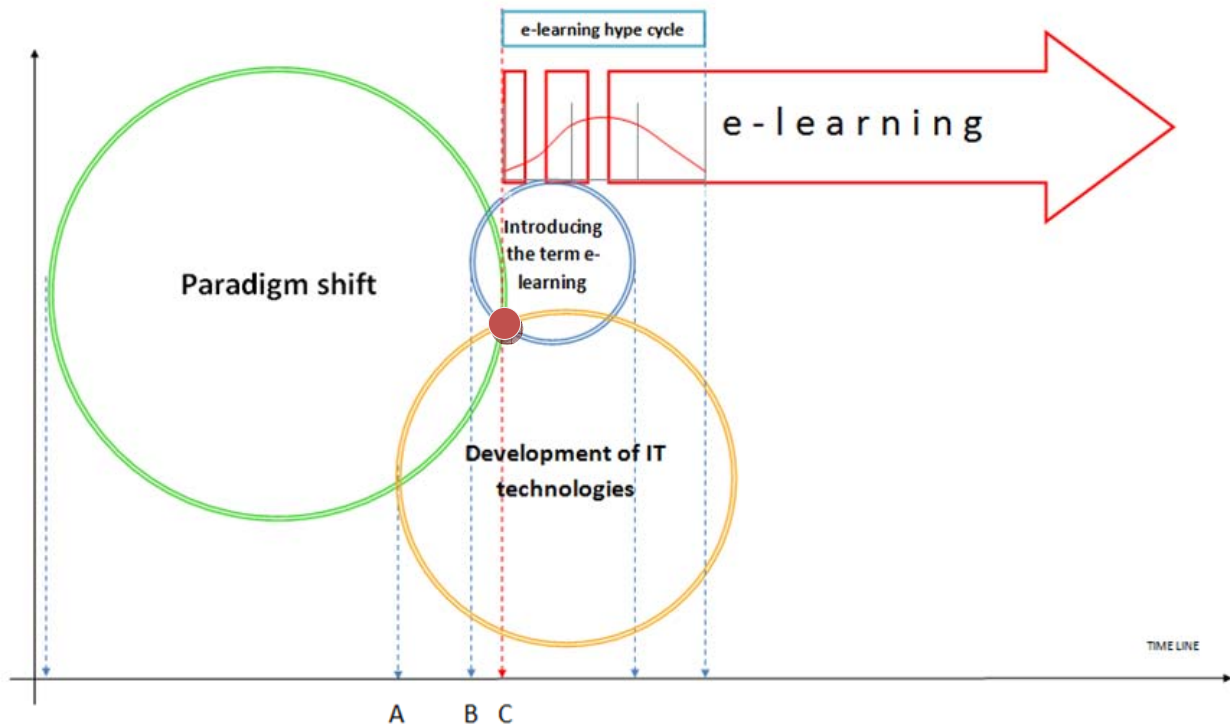


Figure 1. Prerequisites for the emerging of e-learning

- Paradigm shift in education - development of theories, which present the learner as an active part in the training process (rather than a passive listener). The first case when a tutor and a learner are not physically at the same location.
- Rapid information technology development influencing every aspect of peoples' lives including learning.

E-learning is very often perceived as a new method of training enabled by rapid technology development. Given the fact that the formation of a process as complex as e-learning is interwoven with certain circumstances and events over time, this point of view sounds 'incomplete and historically disconnected from its antecedent instantiations, failing to recognize the extensive links between developing educational theories and practices that had shaped the use of E-learning over the past forty years' [15]. The Figure 1 illustrates the prerequisites for the emerging of e-learning. The size of the circles in Figure 1 is indicative only and they are not based on particular data.

The paradigm shift covers the longest period of time. Paradigm shift in pedagogy aims at the change in attitude toward the learner granting him or her an active role in knowledge transfer as well as changing the teacher's role - from leading to assisting the process. At the same time, it covers learning environment changes such as moving pedagogical focus of the learning environment from didactic to

collaborative ways of learning. At the time when 'paradigm shift' meets 'information technologies', their 'meeting' (A) results in computer-based training, later web-based training and finally e-learning (C).

#### 4.1. Contemporary trends in e-learning

In the final section of this paper the author describes contemporary e-learning by creating her own definition. The definition is based on analysis of the key factors determining contemporary e-learning as well as on its historical development.

Combining the advantages of traditional forms of education with the advantages of information technologies, today e-learning is a complex category offering:

- Overcoming of time and place barriers in education - synchronous and asynchronous learning/e-learning.
- Blended learning - combination of traditional methods of training with technological.
- Complex technology architecture – implemented technology components offering multiple services.
- Aligning e-learning with Business – cost optimization and creating benefits to meet the unique needs of customers.

Taking the above characteristics in mind, the author refers to e-learning as a complex system, not just as to a source or tool for learning.

## 5. Conclusions

The author concludes that the building factors in the set up of a definition are: technology, knowledge, network and users.

- Technology - an important factor that distinguishes e-learning from other types of education. Technology is the environment where communication with customers is established.
- Knowledge - Marc Rosenberg defines the learning process as an internal process by which we take in information and experience and then translate it into knowledge or skills (new capabilities) [17].
- Network - in my opinion this factor should not only be limited to the meaning of a technological network. Technological, social, business or a blend of the above mentioned networks may exist in e-learning environment.
- User - not only consumes but is also curious and active in searching the best solution for dissemination or gaining of knowledge (skills). E-learning meets user needs by offering integral package of services that enables access to the whole set of knowledge. It is often characterized by active learner-centered pedagogies [16]. Suppes argued that the single most powerful argument for the use of computers in education is individualized instruction and the dialogue it supports [16].

Based on the above mentioned factors, the author suggests the following definition:

E-learning is a networked learning system which communicates in information technology environment and provides the changing user expectations with a set of learning, learning support and assessment services, thus creating automation and support for the learning process.

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## **Session 17: Science Education**

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# Development and Validation of Measuring Instruments of Contextualization of Science among Malaysian and Nigerian Serving and Pre-service Chemistry Teachers

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## Abstract

*The purpose of this study is to develop and validate instruments for assessing Malaysian and Nigerian serving and pre-service chemistry teachers' contextualization of science knowledge, skills and attitudes and their application outside classroom. Forty item test and twenty item inventory were initially developed. A panel of experts was used for content validity. Readability of the instruments was determined using a sample of 25. Data on pilot study were collected from administration of the instruments on further 85 subjects. The data were used to determine internal consistency and reliability of the instruments. Twenty five items of the test and the entire ones of the inventory were left after these determinations. The results indicated that the instruments are good enough for the purpose it was meant for. Other researchers would find them very useful.*

## 1. Introduction

That the world is experiencing unprecedented growth and advancement in science and technology is obvious. We have various evidences of the growth and advancement all around us. The world stands to benefit more with the efforts being put in place by our scientists and technologists. Yet, there are numerous problems staring the world glaringly in the face to which the scientists and technologists seem unable to proffer solutions. Talk about the economic downturn, the diseases ravaging the entire human race and the fluctuations of global climates resulting in disasters in some parts of the world. The list of inabilities is as long as that of abilities of scientists and technologists in making life worth living on the earth.

The inabilities mentioned above might not be unconnected with the ways the young people of

today conceptualize science knowledge, skills and attitudes in solving problems of daily living and in decision making. The situation may not be that different with the teachers. Studies are constantly reminding us that these young ones are no longer interested in science [1, 2], particularly in developing countries [3]. Enrolments in chemistry, one of the enabled sciences, are in decline in the upper class with serious implications for social and economic development [4]. Hardworking scientists are no longer role models but football players, film stars and pop artists [3]. The image of a conscientious and diligent scientist of the past is gradually becoming a stuff of history [5]. The eagerness to use new technology is not matched with eagerness to study the disciplines that underlie them [2]. Of more grave concern too is the absence of the virtues and ethics of science and technology in the lives of graduates from our schools [6]. The situation pictured above is not helped by the way science is being delivered in the schools. The development of scientific ways of thinking is abandoned in favor of the learning of definitions and standard procedures [7]. These have provoked a barrage of questions. What is the purpose of science we teach in schools? How relevant is it to the students' daily lives? How much of an influence does science have on the daily lives of people in our society? Are we giving students tools to make responsible decisions in future? Are we emphasizing there is a link between decision making and science?

None of these questions will be answered here because they have long been the focus of many studies [4, 5, 2, 8]. But the main concern of this author is with the present crop of science teachers and the ones undergoing training in our colleges and universities. How are they conceptualizing science knowledge, skills and attitudes that they themselves are imparting to the students? Can we see science they teach in the teachers' own lives?

There have been calls by Malaysian government to its people to imbibe sound ethics and attitudinal change in daily lives, particularly in workplace. Many times the teachers particularly science ones are blamed for not doing enough. The shortcomings that provoke these calls are evident in Nigeria and many other developing, and even the developed nations. So a comparative evaluation study of conceptualization of science among teachers of these two nations is conceived by this researcher. The teachers being the major determinants of success and lack of it at the foundational levels of science teaching need be evaluated. To carry out such evaluation the researcher needs measuring instruments in the cultural contexts in which the teachers operate. The purpose of this study therefore, is to develop and validate instruments for contextualizing of science among secondary school serving and pre service chemistry teachers in Malaysia and Nigeria.

An examination of the literature indicated that different types of instruments have been constructed and are in use. There are, for example, Test of Science Related Attitudes [9], Test of Science Process Skills (TOSPS) [10], Test your Scientific Literacy (TSL), Chemistry Attitudes and Experience Questionnaire (CAEQ) [11], Changes in Attitudes about Relevance of Science (CARS) [12] and several others. These are in addition to the numerous tests of science knowledge particularly by examination bodies. A number of these instruments especially those measuring attitudes towards science or scientific attitudes have been criticized for construct validity. Though they are still being use in specified contexts.

No doubt science is a universal discipline. Applying it to solve problems peculiar to certain areas demands consideration of certain cultural

milieu. Malaysia and Nigerian have many things in common. Though they belong to different races almost the same climate, agricultural products, feeding habit and religious beliefs can be found in the two settings. Additionally the curricular they operate for primary and secondary science look the same. Constructing measuring instruments of science knowledge, skills and attitudes among their chemistry teachers bearing in mind these cultural resemblances is tried here.

## 2. The Development

The theoretical framework for the development for instruments for the conceptualization of science knowledge, skills and attitudes is based on the theory of scientific literacy and the nature of science. First put forward by the National Research Council in 1995 and the work of Murica [13], the theory as applied is illustrated in the figure below. The National Research Council 1995 report as outlined in National Science Education Standards of 1996 stated that science content should embrace what students should know, understand, and be able to do in natural science. Murica [13] extends this as a blend of three knowledge dimensions of the nature of science, interaction of science and the society and the enduring and importance of scientific terms and concepts. Knowledge of science will enable individual to use science as a tool for inquiry or discovery, learning, informing and contributing to problem-solving activities and critically reflecting on the role of science in context. These dimensions are expanded in figure 1.

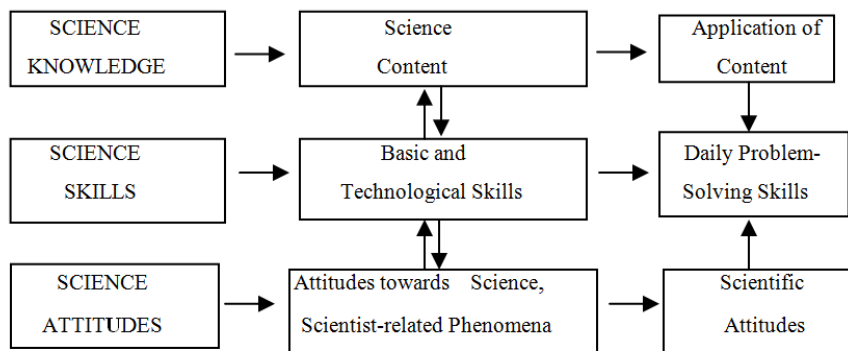


Figure 1. Theoretical framework for contextualization of science knowledge, skills and attitudes

Forty item test covering three sections of and skills application, and twenty item inventory on scientific attitude were constructed. The skill area included test on basic science processes, technological skills and daily problem solving skills. While the attitude dimensions sought responses on attitudes towards science and science-related activities and phenomena (n=10), as well as manifestation of appropriate scientific attitudes like honesty, objectivity, responsibility, suspended judgment and so on (n=10). The responses were scored on 4-Likert scale with positive statements earning +4, +3, +2, +1 and negative items in the reversed order.

A mixed-methodology approach [14, 11] was employed in this development. This is a kind of mid-way or solution to the dilemma of choice making between depths of understanding provided by the use of purely qualitative instrument like observation and generalisability of quantitative treatment using tests, questionnaire and inventory. Testing for laboratory practical skills will involve observation and perhaps interview. This will undermine the generalisability of the study since only few samples could be covered. The researcher also considered the contextualization aspect of the study. To embark on observation in the name of depth of study is possible but might be extremely difficult to carry out in the two settings. Tests and inventory were developed here.

### 3. Validation

The researcher determined content, construct and concurrent validities, internal consistency as well as the reliability of the instruments. A “panel of expert’s” technique was employed in establishing the content and construct validity. This involved subjecting the instrument to analysis by experts, three academics, in the field that the instrument examines – chemistry [15, 16, 11], and three in tests and measurement. The content validity is to ensure that both the instrument measure not only the content of study but also the spread on science knowledge,

science knowledge, knowledge application knowledge application, skill application and attitudes. The expert read through the questions and the statements, and provided detailed feedback about items addressed in the tests and inventory. From this exercise seven of the forty items were dropped with a few modified. All items in the inventory were modified based on suggestions of the experts.

This was followed by checking the readability and comprehension of the instruments. Twenty five serving and pre-service teachers outside the study sample, but within the population of the study were used for this. Another sample of 85 was used for the pilot study. An English language expert was engaged who read through for language correction.

The determination of concurrent validity was to see if the test would differentiate between serving and pre-service teachers. The results of data analyzed show that the serving teachers had higher scores on knowledge and skill application (Table 2.). This difference might be due to experience since many of the serving teachers might have been coming across some situations calling for applications of what they had learned in school days years back.

Data from the pilot study was used to determine the psychometric properties and coefficient of reliability of the instruments. The psychometric properties determined for internal consistency of the test include item difficulty and item discrimination indexes. The same data was also analyzed for reliability using Kuder Richardson formula- 20 and Cronbach alpha for the tests and the inventory respectively.

The thirty three test items were analyzed for item difficulty and item discrimination. The results obtained were presented in table 1. Twenty five items have both “moderate” difficulty index and between “fair” and “good” discriminating index, with the criteria set by Cueto et al [17]. Scores on items that were left out were not used in arriving in table 2 which reports the performances of the study subjects on the test.



**Table 1. Item difficulty and item discrimination of the test**

Section	Item Difficulty	Item Discrimination	Judgment
A. Content-related = 10	50 - 78% = 10	.25 - .35 = 8	Suitable = 8
B. Application- related = 12	51 - 74 % = 10	.23 - .36 = 9	Suitable = 9
C. Skill-related = 10	46 - 76?% = 8	.25 - .36 = 8	Suitable = 8
	Moderate	Fair to Good	No = 25

**Table 2. Calculated means on sections of Serving and Pre-service chemistry teachers**

Sections	Mean of Serving Chemistry Teachers			Mean of Chemistry (Pre-Service Teachers		
	Mean	SD	n	Mean	SD	n
Chemistry Knowledge	5.43	1.46	40	5.62	1.24	45
Knowledge Application	5.55	1.22	40	4.67	1.13	45
Skill Application	6.03	1.43	40	5.20	1.24	45

Scores on content were not significant while those on applications are significant, both at  $P < .01$

The reliability coefficient of the instrument yields 0.77 and 0.81 using KR-20 and Cronbach's Alpha respectively. The sample items were given below.

**Sample Items**

Your friend asked. Do I stand any risk for taking food containing sugar every day? What answer would you give? A. No risk, all food contains sugar; B. No risk, even if you take a bottle of beverage after every meal; C. Risky, run away from carbohydrate food; D. Risky, run away from taking beverage after meal.

Consumers reported flat taste of manufactured products. Which of the following hypotheses would venture the production manager of the factory? A. Wrong ingredients were used; B. Wrong amount of ingredients were used; C. Shelf-life expiration of ingredients had passed; D. Shelf-life of the product had passed

What do you consider the best to do with the heap of polythene bags in your kitchen? A. Take them outside and burn; B. Bury them in the ground; C. Collect them and throw to the dunghill; D. Collect them and pass to the recyclists

Which of the above answers is a good application of Dalton theory stating that matter cannot be created nor destroyed?

You want to demonstrate that chlorophyll contains xanthophylls, carotene and chlorophyll, which of the following would you use? A. Thin

layer chromatography; B. Column Chromatography; C. Gas-liquid chromatography; D. High pressure liquid chromatography.

Banjo queried his teacher. How do we control for the amount of shaking of conical flask in a reaction of HCl and  $\text{Na}_2\text{S}_2\text{SO}_3 \cdot 5\text{H}_2\text{O}$  to monitor concentration effect on rate of reaction? What Banjo meant is A. The result of the experiment remains valid whether you shake slightly or strongly; B. The result is invalid whether you shake slightly or strongly; C. The result remains valid only if we can control the amount of shaking; D. The result remains invalid even if we control for the amount of shaking.

Your advice to a friend to take plenty of water after a meal of bread and tea is based on your idea of A. Alkaline effect of water; B. Acidic effect of water; C. Buffer effect of water; D. Neutral effect of water.

You got to a middle of debate on green chemistry. Your not too science-oriented friend exclaimed, here come the chemist. Tell your idea of green chemistry. Your answer is likely to be A. To produce and eat green food; B. To produce only materials that can help maintain the green nature of the environment; C. To produce environmentally friendly materials; D. Ensure that your productions and practices are environmentally friendly.

## 4. Conclusion

The instruments developed and validated here are meant to assess the contextualization of science knowledge, skills and attitudes by serving and pre-service chemistry teachers. They were developed for use with Malaysian and Nigerian samples in mind. However, they could be used in other cultural settings. The development takes into consideration the theories on scientific literacy and the nature of science. The main objectives of science center on the development of science knowledge, skill and appropriate attitudes and the daily application of the outcomes. The researcher employed conventional methods in determining the validity and reliability of the instruments. These include the use of experts, whose suggestions were gracefully used in producing the drafts which were further used for pilot study. Data from pilot study were used in further determination of psychometric properties or internal consistency and reliability coefficients of the instruments. A few of the test items were dropped based on this determination. The instruments have high coefficients of reliability which make them suitable for the purpose they are intended for. Many researchers will however, find useful in several other area and settings.

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# Benchmarking the Practices of Teacher Education Institutions in Science Education at the National Capital Region, Philippines

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## Abstract

*Based on the premise that quality education demands effective teachers, this qualitative-quantitative study was pursued to determine the practices of Teacher Education Institutions (TEIs) that are capable of effectively implementing the New Teacher Education Curriculum (NTEC). A total of 25 TEI faculty and 68 pre service teachers from four (4) TEIs were the participants of the study. The quantitative and qualitative approaches were employed in the analysis of data. Standardized concept tests, science process skills tests, attitudinaires, classroom observation protocol and interview protocol were utilized in the study. Generally, the faculty in the four TEIs are educationally qualified to teach science. They demonstrated content and pedagogical knowledge as well as the utilization of appropriate assessment tools. However, the preservice teachers from TEIs 1 and 3 performed below the 50 % level in the tests while the performance of those from TEIs 2 and 4 was above 50 %.*

*As a whole, enriched curricula and syllabi, a well implemented faculty development program and strict admission policies are practices that can bring about the attainment of the implemented curriculum and that educational qualification, length of service, high attitudes towards science and science teaching even efficiency in teaching do not necessarily lead to the attainment of TEI's goals and objectives.*

## 1. Introduction

Quality of education is acclaimed as an important and critical aspect of development. Consequently, to attain quality education, there should be effective teachers to ensure the development of the young people's potentials. To develop such potentials, teacher education institutions are tasked with preparing future

teachers who are equipped with in-depth knowledge and pedagogical competence and imbued with the ideals, aspirations and traditions of Philippine life and culture. These responsibilities necessitate innovations and reforms to achieve curricular relevance and responsiveness, which are the hallmarks of academic excellence as stipulated in the Higher Education Act of 1994 that created the Commission on Higher Education (CHED).

Upon its creation, the Commission promulgated guidelines for the undergraduate teacher education programs, and the standards are specified in Memorandum Order (CMO) 30 Series, 2004[2] otherwise known as the New Teacher Education Curriculum (NTEC). According to Limjap[7], this curricular reform is CHED's response to the issues and challenges besetting Philippine Education especially in the areas of Mathematics and Sciences. As stated therein, this curricular reform has the goal and purpose of rationalizing the undergraduate teacher education in the country to keep pace with the demands of global competitiveness.

The revision in policies and standards made the new Bachelor of Elementary Education and the Bachelor of Secondary Education programs closer to the prescribed curriculum of the UNESCO (1985 UN model). The new TEC has a dramatic increase in major courses and professional education courses, but a decrease in general education courses. In the BSED curriculum, the number of units required for each discipline is 60, which is very much higher than the requirement of the old curriculum of 36 units. This curricular reform demands teaching expertise of mentors in both general and major courses.

In this context, the capability of TEIs to implement the NTEC in Science Education needs to be investigated. To achieve this end, the practices in science education curriculum offered prior to the NTEC must be described, and the results of the endeavor may yield findings that can strongly support some bases for predicting the capability of TEIs to offer the NTEC in science education. Insofar as the institutions involved in the study were among the TEIs that initially offered the NTEC during the academic year 2006-2007, their

preparedness must be ascertained. In the inception of the NTEC in science education, successes as well as problems may have been met along the way. Thus, probing into some factors and variables, and describing them may lead these researchers to some practical solutions, and to the development and crafting of new or alternative ways of delivering the science education curriculum that may eventually enhance prospective teachers' knowledge, competencies, and positive attitudes towards science teaching and learning.

## 2. Research Rationale

In this study, practices of the four TEIs that are capable of effectively implementing the new Teacher Education Curriculum in Science Education are described to highlight possible successes and failures. To arrive at the desired research outcomes, the following research problems were formulated:

- What teaching practices can be drawn from the descriptive analysis of the TEI's planned curriculum as specifically reflected in some teaching artifacts such as:
  - course syllabi;
  - faculty profile;
  - faculty development program, and
  - student selection scheme?
- To what extent are these teaching practices specifically demonstrated by the TEI's science education faculty members in the implementation phase of the planned curriculum in terms of their:
  - content knowledge;
  - pedagogical knowledge;
  - instructional activities, and
  - assessment scheme?
- To what extent do pre service teachers demonstrate exit-level competence in terms of their:
  - content knowledge;
  - science process skills;
  - attitude towards Science Learning; and
  - attitude towards Science Teaching?
- What teaching practices of TEI's science faculty members influence the pre-service teachers' knowledge, skills and attitudes?

## 3. Materials and Methods

The descriptive-analytical design was utilized in this research. Both quantitative and qualitative approaches were likewise employed in the analysis

of data and information gathered from several sources.

Content analyses of the course syllabi and other relevant artifacts were conducted to describe the planned science curriculum of the TEI's involved in the study. Classroom observations, focus group interview, and a set of survey questionnaire were also used to describe the teaching practices of the science faculty. Standardized Science Concept Tests such as the Force Concept Inventory (FCI), Biology Concept Inventory (BCI), and Chemical Concepts Inventory (CCI) were used to assess pre-service teacher's competencies in content knowledge. The Teacher's Attitude toward Science Teaching, the Science Process Skills Test (SPST) and the Views About Science Learning Tests were also used.

## 4. The Sample

Four teacher education institutions (TEIs) were involved in this study. Three are private TEIs and one is a state institution. From the four teacher education institutions, two groups of respondents were involved; 25 college faculty in science and 68 pre service teachers. Purposive sampling was employed to determine the respondents of the study. They are the main source of information and data for the study.

## 5. Data Collection Procedures

The researchers first observed the science classes. The data were recorded in the classroom observation protocol. The interview with the science professors was done after the class using interview protocols A and B and after which the BCI, the FCI and the CCI, The Test of Basic Science Process Skills, Views about Science and Survey Questionnaire for Pre-Service teachers were administered. After the administration of the tests, focused group interview was done using the questions in the Interview Protocol C. Simultaneously with the administration of the above-mentioned instruments, other researchers were tasked at looking into the course syllabi, the faculty profile, and faculty development program and student selection scheme of the institution.

## 6. Data Analysis Procedure

Both qualitative and quantitative analyses were used. Through the use of deduction, quantitative data were analyzed after they were subjected to descriptive statistics. Qualitative analysis using induction was employed to extract common patterns that led to the description of effective practices based from the quantitative analysis of data using deduction. The results of this

triangulation are a juxtaposition that revealed the most objective findings and conclusions of the study. Respondents' answers to the interview questions as well as the information elicited from the Classroom Observation Protocols were tallied. These data after categorizing and analyzing them were used to support, validate or rebut the data and findings revealed by the main data-gathering tools.

## 7. Results and Discussion

The data show that there are glaring differences as regards the variables in the planned, implemented and attained curriculum. The teaching strategies/activities, and assessment scheme gleaned from the course syllabi are almost the same. The faculty qualifications and length of experience are almost similar. However the number of units for majorship is very much higher in TEI 2 and TEI 4 compared with those in TEI 1 and TEI 3. A wide difference in the implementation of the Faculty Development Program as well as the opportunities for professional growth extended to the faculty was also discovered based on the interviews with them. There is also very big discrepancy in the capabilities of students in TEI 1 and TEI 3 and those in TEI 2 and TEI 4. While TEI 2 and TEI 4 have the brightest minds as their students, those who enroll in TEI 1 and TEI 3 are often those who were not admitted in TEI 2 and TEI 4.

As regards the implementation of the planned curriculum, the data reveal that the faculty in the four TEIs involved in the study manifested almost the same pedagogical, propositional and procedural knowledge. They utilized almost the same assessment scheme in their classes. There is just a difference in the observed content knowledge of the faculty in TEI 1. The weighted mean obtained is much lower than those in TEI 2, TEI 3 and TEI 4.

On the attainment of the implemented and planned curriculum, the results of the BCI, CCI, FCI, and the SPST show a big difference. The performance of the pre service teachers of TEI 1 and TEI 3 are lower than those of the TEI 2 and TEI 4 in all the standardized tests given to them. However, the pre service teachers attitudes towards science teaching and learning in all the four TEIs are high.

## 8. Conclusion

The curricula of TEI's 1 and 3 follow the CHED minimum requirements, their syllabi are done by the faculty handling the subject, the five year faculty program is not fully implemented and they apply open admission but selective retention. Their faculty possesses the required degrees for

science teachers and has quite a number of years experiences. However, the content knowledge of the pre-service teachers did not reach the desired level of at least 50% which means that the qualifications and teachers' practices as well as the pre service teachers' high attitudes towards science learning and teaching were not enough to bring about the attainment of the planned curriculum. Hence, teaching did not result in the desired learning.

On the other hand, TEI 2 and TEI 4 were able to attain the planned and implemented curriculum as shown by the content knowledge of the pre-service teachers. Practices such as the enrichment of a well-developed curriculum, presence and strict implementation of policies on student admission and retention and giving varied opportunities for professional advancement of the faculty are some practices that may bring about the attainment of the planned curriculum

## 9. Recommendations

It is therefore strongly recommended that the practices which resulted to the attainment of the planned and implemented curriculum be translated into policies and should be disseminated to all TEI's in the country.

## 10. Acknowledgement

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# Influences and Motives for Choosing Engineering Major

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## Abstract

*Students enroll in engineering colleges with pre-defined perceptions about their future profession. Lately, the number of students enrolling in engineering programs in the Middle East is steadily increasing. To learn more about what drives students to pursue engineering majors, a survey with Likert-scaled items measuring different types of influences and motives were completed by 387 undergraduate engineering students. The analysis of the items showed no external influences but was mainly students' own decision while they are largely driven by their interest in the field. The study examined various motivational factors and showed intrinsic motivation including job satisfaction that improves the level of students' creativity in a challenging environment as well extrinsic factors such as financial remuneration and market-related aspects of rewards are equally high important for students.*

## 1. Introduction

Prior to high school graduation, students find themselves in a dilemma of choosing a major to enroll in such as medicine, arts, natural sciences, business, or others. Some students may have some inclinations to specific subject while others may not have any preferences. Such decision can be exceptionally crucial imposing great challenge. In fact, a poor choice in that regard may later affect these students by either changing major or dropping out of college. As such, educational choice is the most commonly recognized life regret for Americans [1]. Several reasons may particularly impact students' choice such as parents' influence, prestige of the profession, high earnings potentials and career prospects, probability of success in the field, or curriculum requirements [2], [3], [4].

During the last 5 years, enrollment in engineering programs across the United States witnessed a small rate of increase. The American Society for Engineering Education (ASEE) recently released a report indicating that enrollment in undergraduate engineering decreased 2% between 2004 and 2007 and then rose 4.5% in 2008 over 2007. In a recent

edition of the Christian Science Monitor, Mertens [5] argues that the actual recession in the United States drives more students to enroll in engineering programs.

Not far from the United States, the Canadian IT Labor Market Initiative [6] contacted 50 Canadian universities in December 2004 where 17 of them responded to a survey measuring enrollment levels in engineering programs for the academic years 2002-03 to 2004-05. The results differed between the specializations for both undergraduate and graduate levels. For example, the undergraduate computer engineering and electrical engineering decreased by (19%) and (11%) respectively whereas other disciplines such as the civil engineering increased by 23%. The open-ended questions, that were used to uncover some steps that should be taken to maintain or increase enrollment levels in these universities, suggested that universities, the private sector, and the government have important role in enhancing the enrollment in engineering programs. At the same time, the respondents stressed the role of secondary schools that can have an important impact such as promoting programs, developing needed skills, offering special presentations to understand the profession, and encouraging female involvement. The above information suggests that enrollment in engineering programs in North America are fluctuating about the mean producing either a slight increase or decrease which implies a steady trend of enrollment during the last five years.

Also in Australia, projections suggest a shortfall in enrollment in engineering studies [7]. Four main factors were identified as influences on poor enrollment in engineering majors: national investment, sources of information, education, and perceptions of the profession [8].

On the other side of the globe, the number of students enrolling in engineering programs in the Middle East is increasing. The Arab countries witness a boost in the number of engineering colleges, engineering students, and engineering graduates which exceeded expectations [9]. For example during the last five year period, colleges of engineering in Lebanon witness an enrollment increase ranging between 5% and 20%. Such fact might not be quiet surprising when we learn that the

number of universities offering Engineering programs is escalating. For instance, the website of the Lebanese Ministry of Education and Higher Education lists forty one licensed universities and institutions from which 15 offer engineering programs with several concentrations. Not far from Lebanon, a drastic increase of 26.4% was observed in 2006 at King Abdul Aziz University in Saudi Arabia. Also, the Sultan Qaboos University at Oman registered an enrollment increase of 30.2% in 2007 [10].

Within all the above information, one question is to be raised: what makes students choose engineering majors? Why engineering is suddenly becoming an attractive major in the Arab world?

## 2. Theoretical framework

We drew two types of factors – influences and motives – to inform the design of the survey. Though none of these factors directly addresses why students might choose engineering majors, they served as a foundation for guiding the development of the survey.

Sources of influences include individuals who may persuade students in their choice for major enrollment such as parents or relatives, friends or peers, and school teacher [11]. Other types of influences include interest in the subject such as aptitude for the subject, interest in the field, and previous work experience [12] and studies' characteristics such as cost of education, and the number of years required.

The motives include the various ways of extrinsic and intrinsic rewards related to the job characteristics. Extrinsic motivators comprise some foreseen benefits such as earnings potential, profession prestige, and opportunities for advancement in the field, etc. Intrinsic motivators are related to job satisfaction, personal growth, and creativity opportunities [13], [14].

## 3. Research Rationale

Colleges of Engineering in the Arab Middle East were founded after World War I, in Egypt and Lebanon and started in the Arab Gulf States in the sixties [9]. For the purpose of this research, Lebanon was considered as a case study. Lebanon has one of the best educational systems in the Middle East where higher education institutions constitute a prosperous source of fresh engineers for the Gulf region and it is regarded as an engineering educational center in the Middle East [15].

Three ranked universities from the top five in Lebanon are targeted: The American University of Beirut (AUB), The Lebanese University (LU), and Balamand University (BU). The American university of Beirut established in 1849 by American

Protestants missionaries implemented the school of engineering in 1951. The Lebanese university established in 1951 is the only state operated university implemented the college of engineering in 1980. The Balamand University was founded by the Greek Orthodox Church in 1988 established the faculty of engineering in 1993. Table 1 shows the increase in the students' enrollment in the three targeted universities between 2004 and 2009 where the total average increase exceeds 10%.

**Table 1. Percent increase above the mean of the targeted colleges 2004-2009**

	2005	2006	2007	2008	2009	%
AUB	1329	1360	1445	1576	1665	11%
LU	2315	2370	2438	2466	2519	5%
BU	557	579	588	713	835	17%

The main objective of this study is to determine some of the main factors leading to the observed increase in enrollment in engineering majors in several Arab countries. This study examines undergraduate students in three leading universities in Lebanon. Because choosing a college major represents a major life decision, the focus of this study is to identify and discuss these motivators by using a Likert-scale survey to better understand what and how "important" these factors are to students as part of their career decision-making process.

## 4. Method

This study offers responses' analysis of 387 students in engineering programs who participated in a Likert-scaled survey investigating the factors that have impacted their decision to choose engineering major. The Likert-scaled items identified influences as well as intrinsic and extrinsic motivational aspects that provided insights into why high school students choose to be members of the engineering community.

### 4.1. Participants

Undergraduate engineering students from the three universities, AUB, LU, and BU, participated in the survey. As of Fall 2009, the number of students enrolled in engineering the three selected university was (1665), (2519), (835) respectively. Professors from different disciplines in the targeted universities were contacted and asked to distribute the survey for their students. The survey invites students to voluntary participate while ensuring them of complete anonymity.



## 4.2. Materials and Procedure

The survey was randomly distributed to the targeted population 5019 and data collection ended when reaching 387 of the sample size while satisfying the appropriate sample size for the given population [16].

Participants were invited to complete a 30-question survey. The instrument was based on the questionnaires employed in previous studies of major's selection [13]; [17]; [18]. Questions included general characteristics such as gender and area of specialty. Students were asked to indicate their knowledge and level of awareness of career opportunities in various disciplines when they completed high school before choosing engineering major. Also, participants were asked to rate 28 Likert-scaled items on a scale of 5 that reflects the leading factors that have contributed to their choice of enrolling engineering program (1 being unimportant and 5 being very important). The 28 Likert-scaled questions related to the potential influences and motives revealed a reliability of 0.852. Descriptive statistics were calculated to obtain the measures of central tendency as well as the measures of variability of each of the identified items.

## 5. Findings and Discussion

Participants were mostly male (76%) with only (24%) female. The sample was distributed among Civil (30%), Mechanical (23%), Electrical (37%), and others (10%). Using a 5-point scale, students were asked to indicate their level of awareness of career opportunities in various disciplines when they completed high school. Table 2 reflects how much students were knowledgeable about the disciplines and shows that the majority of students are not well informed about arts ( $\mu = 2.22$ ), social sciences ( $\mu = 2.3$ ), literature ( $\mu = 2.41$ ) and law ( $\mu = 2.54$ ) prior of choosing their major.

**Table 2. Career knowledge level of awareness (1= Not aware, 5= Excellently informed)**

	Mean	SD
Business	3.01	1.1
Natural Sciences	2.59	1.2
Arts	2.22	1.1
Social Sciences	2.3	1.1
Literature	2.41	1.2
Engineering	4.03	1.0
Law	2.54	1.2
Medicine	3.12	1.4

Also, students were asked to rate the importance of different sources of influences that have impacted

their decision in choosing their major (see Table 3). Although the influence of parents/relatives appears as one of the important factors ( $\mu = 3.1$ ), the highest ranked item is the students' own decision ( $\mu = 4.4$ ) followed by their interest in the subject matter ( $\mu = 3.9$ ). The influence of the genuine interest in the field corresponds to previous research reporting that students' interest in the subject matter ranks highly in determining students' selection for a major [2].

**Table 3. Source of influences for choosing engineering major (1= no influence at all, 5= strong influence)**

	Mean	SD
<b>Advice from parents or relatives</b>	<b>3.1</b>	<b>1.4</b>
Friends' or peers' influence	2.5	1.3
School teacher's influence	2.3	1.3
Close relation with an engineer	2.6	1.5
Family member is an engineer	2.8	1.7
<b>My own decision</b>	<b>4.4</b>	<b>1.0</b>
Cost of education	1.9	1.2
Years of education required	2.4	1.4
Aptitude for subject matter	3.4	1.2
Previous work experience	2.0	1.3
<b>Personal interest in the subject matter</b>	<b>3.9</b>	<b>1.2</b>
High school Guidance	2.4	1.3

However, it is surprising to learn that students choose their major based upon their own decision and personal interests which implies that students had previous knowledge of the interests or abilities required for the engineering major and subsequent job. Since the school teacher's influence and school guidance factors are poorly rated, such result may be explained by having either a close relation with an engineer or an engineer as a family member providing enough information about engineering profession for students. Nonetheless, it might be interesting to know how students have developed their self-assessment to fit in this major as well as their perceptions of the engineering profession. The low rate of school influence suggests that the high school role is almost absent in the students' decision. The school has a major role in preparing students to acquire the adequate knowledge for the best challenging jobs. However, one of the main roles of schools is to provide enough guidance and orientation to students for their major enrollment and career choice. It is not clear if the low rate reflects a failure and neglect of schools in the guidance process or some disregard from the students toward such guidance.

Also, the study investigated the importance of motives – extrinsic and intrinsic – that have impacted students to enroll in engineering major. Table 4 shows 16 items reflecting the importance of motives for students. The high rated intrinsic factors comprise job satisfaction ( $\mu = 4.1$ ), personal growth

( $\mu = 4.0$ ), and opportunity to be creative ( $\mu = 4.0$ ). Such results are consistent with previous studies that showed job satisfaction, the availability of employment and aptitude for the subject were the factors that most significantly influenced the decision to pursue a discipline [13].

**Table 4. Motivational factors for choosing engineering major (1= Not at all important, 5= Extremely important)**

	Mean	SD
<b>Job satisfaction</b>	<b>4.1</b>	<b>.95</b>
<b>Availability of employment</b>	<b>4.0</b>	<b>1.0</b>
Employment security	3.4	1.1
Prestige/social status of the profession	3.3	1.3
<b>Earning potential</b>	<b>4.0</b>	<b>1.1</b>
<b>Promotion prospects</b>	<b>4.0</b>	<b>1.0</b>
<b>Career flexibility</b>	<b>4.0</b>	<b>1.0</b>
<b>Potential of personal growth</b>	<b>4.0</b>	<b>1.1</b>
Potential to travel	3.4	1.3
<b>Opportunity to work for a large corporation</b>	<b>4.0</b>	<b>1.1</b>
Becoming a partner in a partnership	3.4	1.3
Challenging and exciting profession	3.8	1.2
Opportunity to work overseas	3.4	1.3
Self-employment opportunity	3.4	1.2
Possibility to be a director of a company	3.7	1.2
<b>Opportunity to be creative</b>	<b>4.0</b>	<b>1.1</b>

The other important factors fall under the extrinsic desires and were rated equally ( $\mu = 4.0$ ) such as earning potential, promotion prospects, and the opportunity to work for a large corporation which comply with previous studies [19], [20].

## 6. Limitations

This research is a case study that included students from one country in the Middle East region. The scarcity of the available information about education in general and engineering education in particular was one of main constraints of this study. Therefore, there is a strong need for more studies in the region providing data and analysis assessing the status of education enrollment in the Middle East. Also, surveys are a convenient way for gathering information from a large number of participants, but are not enough to gain a complete understanding of students' motivations and perceptions. Interviews may confirm the findings and may be appropriate to gain a more complete picture of influences and motives for choosing engineering major. Further investigations of other Arab students are needed to see the degree to which the findings presented here

are consistent. The milieu of the Middle East region has with no doubt different aspects of perspectives and therefore students who have graduated from high school in this region may have new perceptions that are yet to be discovered.

## 7. Conclusion

The rise of the economy in the Arab Gulf States in the last five years triggered a growth in infrastructure and construction projects. Such situation created a high demand for professional engineers to take on the challenges. Therefore, it is likely that students see their future prospects in the engineering profession. This study showed that students who choose to enroll in engineering programs were driven largely by their desires of reaching a satisfying job that provides opportunities for personal growth and creativity. These participants also indicated a strong need for a profession with earning potentials and promotion opportunities. The results showed identical importance for intrinsic and extrinsic factors which suggest the students' need for a balance between intrinsic and extrinsic driven prospects for a life time profession. However, the observed increase in enrollment requires additional attention to the quality of education provided. Consequently, further studies are needed to ensure that such increase will not be at the expense of the quality.

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# Use of Mobile Phones in Agriculture

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## Abstract

*Mobile phones are playing significant role in every sector but in agriculture, its use is limited. So, an effort in this paper has been made to enumerate the uses of mobile phones in Agriculture which are based on Axinn and Thorat's model of rural social system. As in Production, farmers get timely information of weather forecasts, crop advisory. In Marketing and Supply, day to day information of commodity prices, market and other relevant information are available. Mobile learning can educate farmers. In governance, it emerges with a new concept of m-governance. And feedbacks through it can revolute research system. Primary data was also collected to know the opinion and preferences of farmers towards the use of mobile phones in agriculture. Data shows that farmers preferred information on marketing most, as it attained first rank. According to farmers, State Agriculture Universities are the most credible source of information while private agencies are least. Majority of farmers preferred 2-3 messages per day for fulfilling their information needs. And finally, they preferred SMS is the best way of providing information as they can read and save it for its future use.*

## 1. Introduction

Mobile phones have proven its usefulness to both men and women and are an integral part of everybody's life. Social networking by mobile telephony has opened the channel to enhance the living standard of rural dwellers. This has also become a symbol of progress. If rural telephony grows by 1% there will be an increase of 0.6% in Gross Domestic Product (GDP) showing the impact of growth of rural mobile telephony on Indian economy. Mobile Telephone is playing a very important role in fulfilling the information needs of farmers. The mobile phone based agricultural information services like IFFCO Kisan Sanchar Limited (IKSL) and Reuters Market Light (RML) are becoming popular in India and providing services through SMS and Voice messages about agriculture related information.

Of the next 250 million Indian wireless users, approximately 100 million (40 per cent) are likely to be from rural areas, and by 2012, rural users will account for over 60 per cent of the total telecom subscriber base. With over 300 million mobile subscribers, India is the second largest market, after China, in terms of subscribers [5].

The tele-density of the Punjab state of India is nearly 46 percent which is double the national average of 20 percent. The mobile phone is no longer just an audio communication tool but capable of providing additional integrated functions. The various features of mobile phone, which makes it versatile, are SMS, Voice messages, MMS, GPRS. Therefore an effort in this paper has been made to enumerate the uses of mobile phones in agriculture and opinion of farmers towards the use of mobile phones in agriculture.

## 2. Application of Mobile Phone In Agriculture

Application of usage of mobile phones in agriculture is discussed, which is based on the Axinn and Thorat components of typical rural social system [1]. Production, Supply, Marketing, Research, Governance and Education/Extension are the six major components of typical rural social system.

They further explained that all components are linked with each other. Each linkage has certain characters as Capacity (quantity of transactions over time), Fidelity (quality), Memory and recycling capability. So, there is a need of potential external linkage which has all these characters and mobile phone is one of the best options for it. The applications of mobile phone in agriculture based on components of rural social system are as follows:

### 2.1. Application of mobile phones in agricultural production

According to Axinn and Thorat, production includes the tillers of the soil, the manager of farming operations, and the land owners, along with the

communities of which they are a part. The application of mobile phones in production should be based on the information needs of the farmers. Farmers require the information from the time of crop planting as about high yielding crops, seed varieties etc, about the planting techniques, at harvesting about weather etc.

For better production, accurate and timely information is essential for making right decision. Many management decisions in modern farming require up to date global and local information, for example, weather forecasts and regional recordings of crop diseases and pests. It is also a fact that most farmers own a common mobile telephone with SMS (short messaging service) features. That is why mobile can easily provide this information to the ultimate users. Reuters Market Light and IFFCO Kisan Sanchar Limited are providing the services on weather forecasting and crop advisory in association with Punjab Agricultural University to offer best in class advisory tips in the most timely manner.

## **2.2. Application of mobile phones in marketing**

Market Information Systems known as Market Intelligence Systems, Market Information Services or MIS, are information systems used in gathering, analyzing and disseminating information about prices and other information relevant to farmers, animal rearers, traders, processors and others involved in handling agricultural products.

Marketing today depends on information system, which provides adequate information about what people want, at what price, and who can supply it. Today, IFFCO, REUTERS and other organizations are providing the information related to market. Farmers are in a dilemma as they have no information about market price, no negotiation power with traders and middlemen and finally no profit. That is why, there is a need to provide the technology platform to improve communication among the farmers for aggregate crop information and to access market information.

## **2.3. Application of mobile phones in Education/extension**

In education, mobile phones have come up with the concept of m-learning. The term Learning, or mobile learning, has different meanings for different communities. Although related to e-learning and distance education, it is distinct in its focus on learning across contexts and learning with mobile devices. Mobile learning is a sort of learning that happens when the learner is not at a fixed,

predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies [6]. In other words, mobile learning decreases limitation of learning location with the mobility of general portable devices.

M-learning is convenient in the sense that it is accessible from virtually anywhere. It is also collaborative; sharing is almost instantaneous among everyone using the same content, which leads to the reception of instant feedback and tips. In addition, this kind of learning is engaging and fun. Therefore, it is simple to utilize mobile learning for a more effective and entertaining experience.

## **2.4. Application of mobile phones in supply**

Axinn and Thorat includes the individuals, organizations, and agencies that supply to the production component its inputs (such as seeds, fertilizers, and pesticides ) and the credit and other financial arrangements that makes it possible for supply to flow. Can mobile telephony improve commercial supply chains in developing countries?

IFFCO is a recent example which is using mobile technology in its supply chain. With its roots in cooperative, IFFCO's production is supply driven and not demand driven. Finally, mobile act as best solution for their requirements. Moreover, through IKSL, they are providing services to farming regarding the use and availability of fertilizers, which enhance their supply system and farmers become capable to get the product at negotiated rates. Similarly, the other inputs can be promoted through mobiles and farmers will be in a better position to make an informed decision in selecting the inputs.

## **2.5. Application of mobile phones in research**

Due to its versatility, mobile phones had become a powerful tool. There are number of ICT tools combined with mobile phones create a revolution in present generation. Research and related activities are easily possible with the use of mobile phones. Scientists can easily get the feedback from the farmers and research will become participatory.

## **2.6. Application of mobile phone in governance**

During the past several years, there exist ample evidence that how mobile phones and the simple functions of voice and text messaging (SMS) had empowered citizens and affected the way citizens

interact with each other and with the society as whole. So, a new concept evolved called m-governance.

Kushchu and Kuscü defined m-government as a “strategy and its implementation involving the utilization of all kinds of wireless and mobile technology, services, applications and devices for improving benefits to the parties involved in e-government including citizens, businesses and all government units” [3].

There is a very wide range of potential related governance services which can be delivered and communicated via mobile phones, including services relating to health care, agriculture, education, employment, transportation law and order, tax, judicial and legal systems, etc. Mobile payments, now available in all East African countries, opens up for even greater opportunities and possibilities for transactions such as bill, loan, fine payments and mobile payments for a variety of public services like transport and school fees [2].

### 3. Rural Socio-economic benefits

Mobile telephony effectively reduces the distance between individuals and institutions, making the sharing of information and knowledge easier and more effective. Social networks can be strengthened and individuals empowered through use of their handset. Moreover, Mobile telephony offers some unique opportunities, as:

- It provides global communication channel to rural communities
- It extends the impact of established rural media, such as rural radio
- It helps in making the local content available to the rural people.
- It makes rural services more efficient (logistics, coordination, etc) and cost-effective.

These benefits are amplified by the fact that the spread of mobile technology in some rural regions has occurred much faster as compared to other information and communication technologies.

The technology in question has the following limitations:

- High costs, especially for new generation sets.
- Limited network coverage and low bandwidth in some rural areas. But in Punjab there is no limitation regarding this.
- Limited capacity of rural people to use the technology, particularly for more complicated applications for images, GPS data, etc.
- Low awareness of the technology for educational purposes.
- Technology limitations such as character limit for

SMS (impact on complex information sharing), and the lack of available non-Roman scripts.

## 4. Discussion

A sample survey to know the preferences of farmers regarding the usage of mobile phones in agriculture was conducted on 50 progressive farmers of PAU Kisan Club (Regd). Nearly 200 farmers regularly attend the monthly meetings. Random sample of 50 farmers was drawn from these club members. The farmers were interviewed personally with the help of the structured schedule. Analysis of data was done through frequencies, percentage, mean score and rank.

### 4.1. Preference for the type of information

Preferences of the respondents regarding the type of information required are shown in Table 1.

**Table 1. Preference for the type of information required**

Type of information	n=50	
	Average mean score	Rank
<b>Production</b>	4.16	2 <sup>nd</sup>
<b>Supply</b>	2.84	4 <sup>th</sup>
<b>Marketing</b>	4.76	1 <sup>st</sup>
<b>Research</b>	2.76	5 <sup>th</sup>
<b>Governance</b>	2.68	6 <sup>th</sup>
<b>Education/Extension</b>	3.8	3 <sup>rd</sup>

Marketing was preferred by maximum number of respondents and was placed at rank one based on the mean score. This may be due to the reason that farmers lack market information and they are unable to reap the maximum benefits. Information related to production as weather forecast and crop advisory received second rank. Education and research related information was placed at third rank. And very few farmers demanded governance related information as it was placed at the last rank.

### 4.2. Credibility of the sources

All the respondents considered State Agricultural Universities (SAU) as the most credible source of information and placed it at the first rank. Private agencies were least credible source of information as it received fourth rank as shown in Table 2.

**Table 2. Credibility of the source of Information according to respondent farmers**

n=50		
Sources	Mean score value	Rank
SAU's	4.00	1 <sup>st</sup>
State Agriculture Department	2.76	2 <sup>nd</sup>
Cooperatives	1.88	3 <sup>rd</sup>
Private agencies	1.36	4 <sup>th</sup>

State Agriculture Department and Cooperatives were placed at second and third rank respectively.

#### 4.3. Per day number of messages required

The information regarding per day number of messages required is given in Table 3.

**Table 3. Per day number of messages suggested by farmers**

n=50		
No. of messages/per day	F	%age
2-3	35	70
3-5	10	20
More than 5	5	10

Seventy per cent of the respondents required 3-5 messages per day related to agriculture information. Two-three messages were preferred by twenty Per cent of the farmers. Only ten per cent respondents preferred 5 or more messages per day. All the respondents reported that the messages should be in their local language.

#### 4.5. Preference for type of message

As many as 80 per cent of the farmers suggested that SMS is the best way to provide information as it can be saved in the message box and can be read later on. Only 20 per cent farmers suggested that voice messages are best in fulfilling their information need because it is difficult for them to read (see Table 4).

**Table 4. Preference for type of messages suggested by farmers**

n=50		
Type of message	F	%age
SMS	40	80
Voice Message	10	20

And majority of farmers were unaware about MMS and GPRS facilities as their mobile phones were

devoid of this technology.

## 5. Conclusion

Mobile phones can be a potential external linkage within all the components of rural social system given by Axinn and Thorat. It can help farmer in making right decision at right time during the production and also enable him in gathering, analyzing and disseminating information about prices during the marketing and supply of their crop. Moreover, it provide two way channel, which is useful in research as well as in better governance. Mobile phones can also help in educating farmers:

- State Agricultural Universities should provide these services to the farmers as majority of farmers exhibited SAUs as the most credible source of information.
- Awareness should be created among the farmers about the functions and use of mobile phones, for its full benefit.
- Mobile phones should be used for educating the farmers.
- Government should provide the subsidized phones to the farmers with necessary functions.
- The facility of free/subsidized agricultural messages should be provided to the farmers.

All State Agriculture Universities (SAU) are focusing on production technology but the data shows that farmers preferred information on marketing. And SAU's are most credible source of information while private agencies are the least credible. per day 2-3 messages were considered enough to fulfil their information needs as suggested by 70 percent farmers while 80 percent farmers preferred SMS as the best source of providing information as it can be saved for future. Though few private agencies are providing agriculture information but for the sustainable development SAU's should take steps towards the use of mobile phones in agriculture.

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# Women and Education in Ancient Persia

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## Abstract

*The aim of this expository and interpretive paper, which is based on a library research, is to study the education of women in ancient Persia. The results convey that women occupied a high social and religious position in pre-Aryan, Achaemenid, Parthian and the beginning of the Sassanid periods; Zarathustrianism as well as Mithraism. Obviously, gaining such elevated social status and enjoying authoritative roles in governments, which necessitated a certain level of knowledge and learning, were not feasible without any education. Thus, it can be deduced that higher-class men and women enjoyed similar education.*

## 1. Introduction

Very few studies have been conducted on ancient Persia's system of education. The reason is probably the scarcity of evidence and data from the epoch. Wars and pillages have destroyed the evidence. Expectantly, the education of women in ancient Persia is even more obscure. Hence, the misconception that female education was ignored in ancient Persia, and, like some other ancient lands, women's deprivation of education.

Thus, the question is if education was exclusively a male privilege in ancient Persia or did women also enjoy a relatively similar education as men did. In other words, the major inquiry concerns the system of education in ancient Iran. Due to the lack of the necessary archaeological evidence from the epoch, the answer to this question can be deduced from investigating the social and religious position of women. That is to say, the state of women's education can be inferred from their social standing. So, this expository and interpretive paper, which is based on a library research, seeks to study the role and status of women in ancient Persia during the pre-Aryan, Median, Achaemenid, Parthian and Sassanid periods.

## 2. Literature Review

Scarcely is there a significant study of women's education in ancient Persia available. Even those books and papers which explore educational issues in ancient Iran, such as Iran's Cultural History, The Pre-Islamic History of Education in Iran, A Survey of Culture in Ancient Iran, The Encyclopedia of Educational Establishments in Iran, etc., do not go further than a passing reference to or general discussion of women's education. Also, research has been conducted on women's issue in ancient Iran, such as the situation of women, women's rights in the pre-Islamic period, women's social standing, women's attire, and super-women in ancient Iran, but hardly had the bulk of research attended to their education. This study seeks to fill the gap.

## 3. Analysis of Findings

### 3.1 Women's social standing in ancient Iran

**3.1.1. The pre-Aryan period (matriarchy).** For the first time in 1949, archeologists discovered traces of pre-historic people during their explorations in a cave in Tang Bideh (Bakhtiari Mountains, North-East of Shooshtar, Khuzistan). According to their findings, they reported the standing of women: "In this primitive society, women were endowed with certain responsibilities. Women were the sentries of fire and probably the inventors and producers of pottery. Besides, it was women who governed the tribe and priested. The pedigree was named after wives. Women could explore the mountains in search of edible roots or wild fruits with their sticks. Hence, men had a high regard for women and associated them with plenty and abundance"[6].

**3.1.2. The Median period: About 3000 B.C.E.** Aryans migrated to Iran. They lived by herding. Medians and Persians also came to Iran as well. All this led to a change in the circumstances. The discovery of metals and their manipulation in agriculture marginalized women from society and production, hence their dominion in social and domestic spheres was lost. In the Median era was a patriarchal one [12].

**3.1.3. The Achaemenid period.** Women's status in the Achaemenid era was very significant. With the accession of Cyrus the Great (c.600-529 B.C.), women were so highly regarded. Other nations also noticed Iranian society's esteem of women and imitated it. The best instance of equity can be found in the fact that women could be heirs to the throne during that era. Astiak, the last Median King, did not have a male heir. His daughter, Princess Māndānā, played a significant role to pass the throne to Cyrus, her son. She was also the founder of Persian schools in which archery and riding were taught to the adolescents. Many women occupied authoritative and critical positions. It was in the Achaemenid epoch when a woman, Artemis, was promoted to the commander in chief in Xerxes' (Khshiarsha's) navy for the first time. Panthea, Arsiab the Commander's wife, was the commander in chief of the guard. Stateira, Darius III's daughter, was the commander in chief of the army.

Women's esteem declined after the reign of Darius, especially among the nobles. Yet, poor women could keep their freedom for they had to labor to earn their living. On the other hand, the noblewomen did not dare to leave their homes but in veiled litters. Besides, polygamy was prevalent especially among the nobles, the Kings and the royal family [11].

**3.1.4. The Parthian period.** During this epoch, it was common to worship gods and goddesses, especially the goddess Anāhita. This mere fact conveys the respect that women were subject to at that time. Kingship was bestowed on Kings by goddesses and the Queen was also considered to be divine. Artādokht was the Lord of Treasury during the reign of the fourth Parthian King and Artaban V's daughter, Sūra, was the commander in chief of the army [9].

Women accompanied men in wars. In contrary to Achaemenid wives who were bound at home, Parthian women participated in celebrations and religious ceremonies. Even some Queens participated in such festivities, as the coins demonstrate. Farhād V sat on his throne with his mother and his coins mark both their faces. However, the general rule demanded the separation of men and women.

Polygamy and inbreeding were widespread, especially among the nobles [2].

**3.1.5. The Sassanid period.** In this epoch, the Iranian society was based on blood and possession. Law promoted a hierarchical structure. Governors and aristocrats were privileged while others were deprived. Aristocrat and distinguished women had the choice either to participate in public religious ceremonies or to hold their own ceremonies

individually. They could have guarded the holy fire at certain times and work as judges and lawyers [3].

Āzarmeydokht and Pourāndokht reigned over Iran in the seventh century. The participation of lots of women warriors in the war with the Roman Empire is also reported. The approval of the reign of these two women as well as their reputation proves that their reign was also sanctioned by priests [5].

Priene, Ghobād's daughter and his judicial counselor, and Semiramis, the daring Queen of Babylonia and Chaldea, are among the eminent women during this era.

Polygamy was the underlying family principle. The number of wives depended on the husband's economic situation. As the result, the men of lower strata could not afford to have more than one wife. Inbreeding and consanguine marriage were common among the Sassanid Kings.

In the Sassanid period, women were not deemed as rightful individuals; rather, they were treated as objects. In other words, a woman was not a rightful citizen but one that could be lawfully owned [10].

## **3.2. Women's position in ancient Persian religions**

In ancient Iran, numerous religions and sects appeared, the most important of which are Mithraism, Kiomarsi, Zarathustrainism (Zoroastrianism), Manichæism, Mazdaism, Zorvanism and Marcionism [1].

Mithraism and Zarathustrainism are two of the most influential religions of ancient Iran. Zarathustrainism has had lots of followers till today and Mithraism was spread even as far as the Roman Empire at that time. The state of women in these two major religions will be investigated.

**3.2.1. Mithraism.** Mithra, one of Indo-Iranian gods, gained momentum for centuries in the Roman Empire as a rival for Christianity. Mithra is a significant god that has been a part of the history of many countries. Mithra's worship was expanded from the East of India to the Western borders of Europe and North Britain [15].

Mithra or Mitra is the god of pledge, an ancient Aryan abstraction. The incarnation of this cunning god is "The Majestic King." Mithra is accompanied by a number of gods and goddesses. Ashi, the first goddess in Mithraism, is the guardian of the marrying youth and procreative animals. She is usually attributed as "*vangohi*," i.e. good. She bestows beauty upon women and grants supply to households. Pārandi, a symbol of procreation, is another goddess that guards people's possessions. Chisti, the goddess of wisdom, and goddess Daenā see to religious ceremonies [8]. Anāhita, the goddess of water and its sentry, had a very high standing among Persians. Achaemenid Artakhshathra II

promoted the worship of Anāhita all over Iran and erected her statues in the sanctuaries. Anāhita, meaning impeccable, is a young, charming woman with a bright face and silver body, wearing an embellished belt. Besides, Iranians made a guardian goddess for each city [4].

**3.2.2. Zarathustrainism.** The adjectives *rita sia bānoo* and *Asha bānoo*, virtuous and decent, are attributed to women in Zarathustra's *Zend-Avesta* and Sanskrit. In most languages, including the European ones, God is referred to with a male pronoun. Still, according to *Zend-Avesta*, *Ahura-Mazda* or *Ormuzd* has both paternal and maternal dimensions. From among *Ahura-Mazda's* six Characters, three—Vahu Mana (wisdom), Arta-Vahishta (decency) and Khshathra-Vairya (mightiness)—are masculine, and three—Spanta-Armaiti (pure love), Haurvatāt (perfection) and Ameretāt (immortality)—are feminine.

*Zend-Avesta* does not discriminate the male and the female. Anāhita, a goddess, and Mithra, a god, are equally regarded. Men and women are equally treated and similarly regarded. Zarathustra believed that men and women are equal because they are created from the same essence [14].

In Gathas, Zarathustra's psalms or versified sermons in *Zend-Avesta*, women are free to choose based on their knowledge and wisdom. Zarathustra granted free choice to his youngest daughter, Pourochista, in marriage.

*Avesta* deems the education necessary for both men and women: "Girls should study more than boys do" [my translation] [16].

Due to various reasons, after Zarathustra and especially during the Sassanid period, the elevated status previously granted to women and the acknowledgment and observation of their rights faded away. Women could no longer enjoy their previous liberation and social standing [13].

*Vidaēva-dāta*, a book written by the fundamentalist and biased Sassanid priests, conveys the decline of women's social standing. Although there were some who did their best to revive *Avesta* and its teachings, their attempts could not achieve much in the contemporary crisis. Women were no longer the masters of their households, maidens had no will of their own and the divorce laws were deficient.

**3.3. Education in ancient Persia.** Since the establishment of a central government in the Achaemenid period until the end of the Sassanid period, government had a major impact on education. The goal of education was to prepare individuals to serve their family, society and country; to develop personally; to develop social beneficence in people; and to contribute to the development and welfare of the nation. Religio-educational establishments

included home, sanctuary, elementary school, high school and the Court.

The Magi and Hērbadhs were responsible for public education. Teachers were highly esteemed in ancient Iran. Educational programs included religious and ethical teachings that were mostly offered in the sanctuaries as well as physical exercises, such as riding, archery, hunting, swimming and fighting, to build a healthy and capable physique.

Education began at dawn and went on till some hours after the sunrise. Children older than seven were the subjects of education. Princes and Princesses' education continued up to the age of twenty. Further education was available to priests and the nobility.

The lapidaries found in Persepolis and Bisotūn show that arithmetic, astronomy and geography were a part of the educational program. Technical knowledge was passed from parents to children in each occupation.

Scarcely is there any knowledge about the state of the education for women in ancient Persia. But the evidence proves that privileged women had the chance to learn riding, music and game of ciopgan in addition to housekeeping [7].

#### 4. Contribution to Knowledge

This research can contribute to the Iranians' understanding of their ancient culture and civilization, hence their national identity formation. Furthermore, it will hopefully introduce a certain aspect of the ancient Persian civilization, namely the status of the education of women and their social standing, to the international community. This, in its turn, will assure Iranian women of their capacities and encourage them to participate in social affairs and realize their potentialities.

#### 5. Conclusion

The results convey that in pre-Aryan, Achaemenid, Parthian and the beginning of the Sassanid periods, women occupied a high social and religious position both with regard to religious beliefs—in Zarathustrainism and Mithraism—and their social standing—Queen, commanders in chief, lord of treasury, judge, lawyer, ruler, etc. Obviously, such elevated standings and authoritative roles in governments, which necessitate a certain level of knowledge and learning, were not feasible without any education. Such positions necessitate detailed knowledge in realms of politics, artillery, finance and jurisdiction. Thus, it can be deduced that noble men and women enjoyed relatively similar educational opportunities in ancient Persia.

## 6. Future Work

Future research will be directed toward:

- Women and education in the religions of ancient Iran
- Women and education in ancient civilizations (Egypt, China, India, etc.)
- Women and education in the contemporary period

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# Disabled Children and XO Laptop: Integration and Inclusion Patterns inside the CEIBAL Plan in Uruguay

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## Abstract

*This article presents a work-in-progress fieldwork experience. The main subjects of this work are the concepts of integration and inclusion in a particular environment – the Uruguayan special schools – which is living a sort of revolution – the “One Laptop per Child” project – together with the rest of Uruguay’s primary schools. The main idea is that giving a laptop to every child shifts the paradigm which connects the disabled children to the abled ones through the means of technology: they cease to be the only ones using technology at school, and a new environment is created where the computer is no longer a possibility, but a matter of fact. The traditional means with which a scholar’s integration process is evaluated can change dramatically because they become an existing part of the environment and they are no longer an objective to aim for.*

*This paper adopts various analysis techniques, from the semi-structured interview to the ethnographic observation, pointing towards the realm of action research. The final objective is double: exploring the present conditions of the environment studied and defining guidelines for planning future work.*

## 1. Introduction

This paper is organized as follows: chapter two explains both the theoretical and practical background, illustrating the structure of the projects in which the research is collocated; chapter three explains the ideas driving this research project and the methodology being used; chapter four reports some reflections on the experience so far and explains some ideas for the research development.

## 2. Backgrounds

This paper is mainly about technology and special education. Assistive Technology (AT) is the usual point where Technology and special education meet

themselves. ATs allow disabled people to find “their way” of doing something [2], [9]. This, together with the possibility of living an independent life [2] is the major advantage of these kinds of solutions. Many AT tools are computer related: they can be hardware devices or software programs.

Choosing a good technological solution for one particular person is not easy: these aids are not industrial products with well defined capabilities; they need to be tested, combined and moreover accepted by the person who will use them. Normally, they cannot be used off-the-shelf: they need to be adapted, and the environment in which they will be used also needs to be prepared to receive them [6].

Traditionally, usage of these kinds of technologies in schools has been considered as a way of empowering a few individuals to bring them (almost) to the same level of the rest of their classmates.

Following the ideas proposed by A. Canevaro [4], a good approach to AT in classrooms should consider the following three aspects:

- Every child in the class, disabled or not, should know how the assistive tool works, what it is useful for and what parts it is composed of;
- Every child should learn how to use the assistive tool;
- The set up of the environment for the disabled children should be considered as part of the learning activity for every child.

The context studied leads to the reconsideration of these concepts and guidelines from a new point of view. The following paragraphs will explain how this is possible and how the environment is making it happen.

### 2.1. The context studied

Knowing the context where this work is set is essential to understand the starting point for a discourse on inclusion in technologically enhanced schools.

**2.1.1. The "One Laptop per Child" Project.** The "One Laptop per Child" project started in January 2005 at the Massachusetts Institute of Technology from an idea of Nicholas Negroponte. The original idea was to produce a \$100 laptop, a machine designed for learning by doing with high connectivity. The practical result is the XO laptop, which is a bit more expensive, but is still cheap and has an innovative interface.

The XO laptop and its graphical environment, called Sugar, follow the theories of constructivism developed by MIT Media Lab Professor Seymour Papert [16], [17] and the principles articulated by Nicholas Negroponte [14].

According to the OLPC mission statement, it is an educational project, not a laptop project. The learning vision of OLPC is that by giving children direct access to connected laptops, they can actively take part in processes of knowledge construction, and not be limited to passive reception of information.

**2.1.2. The CEIBAL Project.** Uruguay joined the OLPC project in December 2006, and the CEIBAL Project started at the beginning of 2007. Thanks to this plan, about 400,000 laptops have already been distributed to public primary school pupils for free, covering the whole country. The CEIBAL acronym stands for "Conectividad Educativa de Informática Básica para el Aprendizaje en línea" (Educational Connectivity of Basic Computer Science for Online Learning).

The project has three objects of interest in Uruguayan society: the children, the teachers and the families. The children receive the most direct benefit from the project: they learn how to use the computer as an instrument for studying, for learning and for cooperating. They are taught how to use it at school by their teachers, who received classes before the students. The family, finally, can experience technology through the same laptops that the children are allowed to bring home, just like any school book.

The CEIBAL project is developed by LATU (the Uruguayan Technology Lab, a semi-public organization) and ANEP (National Agency for Public Education).

**2.1.3. The Uruguayan School System.** The Uruguayan primary education system is divided into various areas, including ordinary education and education for special needs.

Schools for children with special needs are divided on a "disability classification" basis: schools for the blind, for the deaf, for the movement impaired and for children with various intellectual disabilities, ranging from learning disabilities to emotional and behavioral disorders.

Some children in special schools are integrated in ordinary classes, which means they physically move from their schools to the other schools in order to participate in classes on a regular basis. They receive support for their physical needs from a person who is normally part of their family. The system does not include individual, specialized teachers for the children. The special schools provide traveling teachers who visit the integrated schools from time to time and provide them with the information they need for curricular adaptations.

### 3. Research Rationale

The research takes place in an almost totally unexplored environment: Uruguay is the first country where every child literally owns a computer. Uruguayan children can be fully considered Digital Natives: according to Prensky [18], they are growing up in the Information Era, surrounded by technological devices such as computers, internet and mobile phones. Prensky also stated that their thinking patterns are different in respect to those of the previous generations.

The environment in which they live has changed, too: they will always see their schools as places where computers are part of everyday life. Disabled children in their classes will be users of the same technological device, even if with some adaptations.

Moreover, the XO laptop seems to be perfectly adherent to the principles discussed above regarding AT solutions in classrooms:

1. Every child in the class, disabled or not, should know how the XO works, what it is useful for and what parts it is composed of;

2. Every child should learn how to use the XO laptop;

3. The set up of the environment for the children should be considered as part of the learning activity for every child.

This equalitarian environment seems to be in contrast with the educational system itself: schools are divided in ordinary schools and special schools, but they receive the same technology and have to follow the same academic program.

This apparent contradiction is the starting point for this research, which is also based on a set of questions:

- what is the idea of integration in the environment studied?
- what is the real role of (Assistive) Technology in the Integration process?
- can massive use of technology in school classrooms influence or modify this process?
- is the XO laptop (and the Sugar software platform) a good instrument to address this particular issue?

### 3.1. Beyond methodology, towards a research strategy

The total amount of time spent in the fieldwork will be 6 months, 5 of which were spent between February and June 2009 and 1 month more will be spent there in April/May 2010.

The research is oriented toward the action research model, with particular focus on designing new solutions for XO laptop accessibility and scholar inclusion.

The fieldwork followed a general-to-particular approach, hence the need of using different research techniques for different steps: the methodology is mixed, so talking of a “research strategy”, as Trinchero states [20], is considered more appropriate.

The first period was spent in immersive observation to identify the main components of the landscape. The CEIBAL plan was studied from different points of view, while collaborating with its research and development division and visiting schools to meet the teachers.

Special school teachers received the XO laptop around February 2009, while the children received them later. This opened the possibility to meet the teachers while they were adopting the new technological device, and this generally meant a good outlook toward it. They needed to be taught how to use the XO laptop and its user interface, which was completely new for them. Teaching them favored the initial dialogue with the gatekeepers of the environment studied, both teachers and headmasters, so they acted as good institutional informants [5].

After the first period the focus moved on to some interesting cases, of schools and children alike. A school, called “School 200”, was chosen to be the main host for the research: all the pupils of that school had some sort of mobility impairment, generated by different causes with different entities. The school had ninety six students, six of which were also integrated in ordinary classes.

A series of semi-structured interviews was conducted with the teachers and the educators working at the School 200 and the teachers of the schools where children with special needs were integrated. During the same period, the children were observed while freely going around the school, while using the XO laptops and while spending time with the classmates of ordinary schools. The interviews tended to explore the actual idea of integration and inclusion in the environment studied, while the observation of the children was useful to understand what they thought about their relationship with the ordinary school classmates. Integrated children were also followed in their ordinary school classes to observe how they interacted with the other children. This observation was made following the guidelines provided by Berg and Heins [3], [10]: the

relationship with the children was kept informal to avoid the risk of a too rigid role-building process. Children initially tended to perceive the researcher as a new Computer Science teacher, but this assumption was regularly denied, by explicit declarations and by the means of friendly and playful behavior.

After the first five months spent in Uruguay, contact was kept with three of the children, by means of chat and video-chat on the XO laptop, while a second cycle of interviews is planned for next year.

While spending time in the School 200, a simple grid for testing accessibility needs of the mobility impaired was adopted. Some solutions were introduced to help the children use the XO laptop more advantageously. Some well known solutions were adopted, such as screen magnifiers, onscreen keyboards and mouse keys, while other solutions were designed or developed alongside the fieldwork. This meant adapting part of an earlier software project [12] to be used on the XO laptop and designing a brand new solution together with the teachers [12].

## 4. Conclusions and Future Work

Even if the analysis of the data collected has not yet finished, some aspects arose during the fieldwork which are interesting for this research and for future work.

First, it appears to be necessary to give a good definition of “integration” and of “inclusion”. Following the ideas discussed by Oliver and Medeghini [13], [15], the two terms are not synonyms, as they could seem. The word “integration” has been heavily criticized for its closeness to *paternalization* [7]: on the other side, “inclusion” seems to be the best perspective in which *education for all* can be achieved. According to Medeghini, inclusive education should provide “an adequate background for the different abilities in learning and relationship environments” [13].

As discussed above, the CEIBAL plan has the potential to be a highly inclusive environment: technology is meant to provide a background where different abilities can find their place. If the old model only considers a technological device as a sort of prosthesis given to the disabled, instead inside CEIBAL it becomes an unreplaceable part of the environment itself. But the real background of Uruguayan schools seems to follow a different model: they tend toward the integration of children with low level disabilities and not the integration of all the disabled children. Moreover, interviews with children of special schools integrated in ordinary schools showed that they feel that the special schools are “too easy” and unworthy of their consideration. From the teachers’ point of view, the new technology introduced by the CEIBAL plan is problematic since it is totally new and difficult for them to learn. All



this seems to lead to the need to find a new equilibrium where technology is a part of the inclusion process, as well as the children and the teachers.

A second aspect to consider is a more technical one: the XO laptop is something different from any other computer. It has a child-oriented design, it is robust and it features an innovative operating system with a graphical user interface which does not adopt the desktop metaphore.

This leads to a few problems:

1. the XO laptop can be considered as nothing more than a toy, especially by adults, so it is often seen more as a distraction than as an educational tool;

2. users who are already confident with other operating systems or who use some particular applications on ordinary computers cannot normally find what they need (or what they think they need) on the XO;

3. the Sugar graphical interface lacks the implementation of accessibility options which are commonly present in major operating systems. Since this research project is oriented on the action research model, these three points have been considered during the first period of fieldwork, and some solutions were proposed for the local community. The results were some small applications which supported minor accessibility options (providing the users with the possibility to use a mouse with keys and enhancing the keyboard accessibility) and the design of a new program which could turn the XO laptop into a VOCA (Vocal Output Communication Aid) similar to the ones used in Alternative and Augmentative Communication treatments.

Future work will concentrate on these same aspects, both the theoretical and practical ones, trying to define guidelines for technology-based special education which could be applied in different contexts.

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# A Critical Analysis of a Muslim Female Educator's Practice in a Canadian Islamic School: Melding Cognition with Critical Pedagogy

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## Abstract

*In this paper, 12 grade-4 Arabic-heritage students enrolled in an Islamic school were provided with explicit instruction in the use of question-answering to enhance reading comprehension. Instruction included teacher-focused modeling during the first 3 sessions, followed by guided practice and by independent question-answering during the next 3-session blocks, respectively. Data consisted of classroom observations, field notes, and student interviews. Findings reinforce that melding cognition with sociocultural studies would better prepare certain cultural groups to participate in transformative learning. Cultural expectations influenced student and teacher responses to instruction. Some considerations are discussed for educators providing explicit strategy instruction to students from diverse cultural backgrounds.*

## 1. Introduction

This paper provides a critical analysis of a Muslim female educator's practice and her move towards fulfilling the role of an intellectual in a Canadian Islamic school. The author discusses her experiences as an Arabic-heritage teacher delivering explicit strategy instruction in the use of question-answering to Arabic-Canadian students, and refers to critical pedagogy [1] and social learning theory [2].

Freire addresses humanizing education by critiquing the banking concept that alienates and dehumanizes students. It is important to understand that any democratic dialogic discourse in a classroom involves a shift in the role of teachers. During discussion, a teacher's role shifts from an expert to a moderator in order to engage students in collaborative learning. Of particular relevance to the study reported here, Arabic culture is collectivist and promotes

interdependence, respect for authority, and group consensus [3 Rababah] [4 Richardson]. The author is of Arabic heritage and has completed postsecondary degrees in the Middle East and in Canada. From the critical pedagogy perspective, the author decided to initiate transformational cultural change by modeling the question-generating process.

According to social learning theory [2 Bandura], students can acquire new knowledge and skills by observing the behaviors of their teachers and peers. Most relevant to this study, participants were encouraged to adopt question-answering as a reading comprehension strategy by observing their teacher model this process through the use of explicit instruction.

## 2. Research Background

The author chose to use case study methodology in order to gain insights on how explicit instruction can be used to promote Arabic-Canadian students' understanding to question-answering strategy. Twelve Arabic Canadian grade-4 students (7 female and 5 male) and their teacher (the author) participated in the study. Students were 9 years of age and attended a Canadian Islamic school. The instructional unit on Medieval Times [5] consisted of three 45-minute lessons for a total of 20.25 instructional hours delivered over a 6-week interval. Instructional sessions were audio recorded, and the author provided supplemental field notes following each lesson according to Creswell's model [6]. Students' abilities to apply the strategy as part of the guided instructional and independent instructional sessions were of particular interest. The author's responses to the lessons also were recorded, as were her perceptions of students' reactions to instruction. The 12 students also participated in a 30-minute, semi-structured exit interview during which they were asked to describe

their experiences using the question-generation strategy and their reactions to explicit instruction, and to evaluate the effectiveness of this instructional approach and reading comprehension strategy. Data analysis consisted of the author's reading and review of her instructional field notes and interview transcriptions in order to develop a holistic understanding and to identify differences, similarities, and connections among the data sources, again following Creswell's model. The paper focuses on two main themes: (1) cultural response to explicit instruction, and (2) melding cognition with a sociocultural context.

### **3. The cultural response to explicit instruction**

Students' initial responses to explicit instruction appeared to be affirmative. The findings demonstrated that cultural expectations associated with proper classroom conduct and adult-child communication patterns may have reinforced these students' initial receptivity to explicit instruction and willingness to mirror their instructor's use of the question-generation strategy. At the same time, students' collectivist cultural background may have discouraged them from applying the strategy independently [7]. Without teacher modeling, students required substantial encouragement and reinforcement to use the question-generation strategy.

#### **3.1. Melding cognition with a sociocultural context**

The author believed that her cultural background and experience discouraged professional risk-taking and experimentation. More positively, observing her students' learning gains and enhanced metacognitive awareness appeared to empower her to continue to teach explicitly. Participating in self-reflection and monitoring was also a source of motivation for the author. She regularly reflected on her learning experiences and the gains that resulted from using question-generation and other strategic processes. She also appreciated being able to share these reflections with other educators. Similar to students' experiences here, social dialogue and problem solving enhanced reflection and commitment to the learning process. The author found that the use of metacognitive tools as a leverage point into the sociocultural context of learning included many social repercussions that were not

anticipated until she learned about Freire's critical pedagogy [1]. The author's role as a teacher-intellectual was shaped by her personal background which was affected by many social forces. She learned about the importance of referring to cognition by using explicit strategy instruction in Arab culture in order to prepare Canadian Arab students to be engaged in the transformational process. Most importantly, the author learned from the critical pedagogy that she was just looking at the micro level embodied in her teaching styles and the interaction with her students and ignoring the macro level embodied in the school's policy. She experienced the third space as an internal and communicative state of being where opposing or diverse ways of knowing and experiences interact and develop into her learning experiences [8].

### **4. Conclusion and Future Work**

The study provided firsthand accounts of how to create dialogic education in a culture where dialogic education is not culturally recognized. The author contributed an aspect of cognition to work towards achieving a form of transformative pedagogy. In this manner, she prepared her students to become ready for a more critical and complex role, which is social cultural change through questioning. They were able to think about themselves through various controversial opinions, engage with the claims of others, and address questions of justice, such as "why is this going on in the world?"

Other research [9] indicates that a variety of factors such as the school and classroom contexts influence teaching perspectives and practices. Additional research from the socio-cultural lens is also needed to examine the political/social conflicts that may impede transformative pedagogy in certain cultural groups and the possibilities that may exist to help this pedagogy to be internalized in these cultural groups such as the Arab culture.

Further study would be needed to examine the relationship between explicit instruction and teachers' beliefs towards explicit instruction, especially when working with teachers from diverse cultural backgrounds teaching within different educational systems (e.g., centralized and decentralized curriculum). Experienced and beginning teachers need to be provided with the opportunity to develop their knowledge, their beliefs, and their skills with respect to explicit strategy instruction. They should also be encouraged to consider how their students' cultural

backgrounds may affect their reactions to explicit strategy instruction.

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# Accountability in Private Schools in Ontario: Principal's Perceptions

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## Abstract

*The neo-liberal ideology that has gained prominence over the last several decades has promoted the privatization of education on the grounds that it will make education more accountable by making it more efficient or more responsive to student needs. However, in Ontario, private schools are not subjected to the same level of financial or academic scrutiny as their public counterparts. This research reports the findings of a web-based survey of private school principals administered in November 2009.*

## 1. Introduction

Ontario's 877 private schools are products of Sections 1.1 and 16 of the Education Act, the only 2 of the 351 sections in the Act that regulate private schools. Those Sections require only the filing of a basic single page Notice of Intention in order to open and operate an Ontario private school, and subsequently only require the reporting of very basic statistical information, on pain of only rather small monetary fines. Furthermore, inspection of the standard of instruction, inspection of teachers, and the ministerial administration of tests is purely consensual and is conducted only by request of, or upon agreement with, each private school. These inspections and tests cannot be unilaterally initiated by the Ministry.

Section 16. (7) of the Education Act severely limits the scope of the Ministry's inspection. Only the standard of academic instruction can be inspected, and only at those 287 Ontario private schools that offer secondary school subjects leading to the granting of the Ontario Secondary School Diploma. The standard of instruction provided by the other 590 private elementary and secondary (noncredit granting) schools cannot be inspected at all, even though a student might enter one of those schools in kindergarten, remain enrolled for 9 years, and graduate from Grade 8. Nor can any standard of operation other than academic instruction be inspected.

The question that must be asked, then, is how without any provincial academic inspection process or other form of public accountability in place for private elementary schools, are students who exit those schools subsequently evaluated with respect to

their proper preparation for, and appropriate admission into, secondary schools? The legislative answer for those students not promoted from a public or separate publicly-funded Ontario school is contained in Section 41. (2) of the Education Act:

*A person who has not been promoted from elementary school shall be admitted to a secondary school if the principal of the secondary school is satisfied that the applicant is competent to undertake the work of the school.*

No further legislative requirements exist. Each secondary school principal is, therefore, left to individually and somewhat subjectively determine private elementary school student competence after 9 years of independently determined and unregulated education. The academic standard of accountability for such private schools, therefore, is highly subjective, ultimately determined by individual secondary school principals, and is not objective or consistent across the province.

Private secondary schools intending to offer secondary school credits must be inspected as to their standard of instruction in order to grant, under the Minister's name and authority, secondary school credits and the Ontario Secondary School Diploma.

What accountable standard of instruction has Ontario's Ministry of Education deemed reasonable? As outlined in the 2005 Field Services Guide, inspection is limited to student performance, and in particular to "inspection of the school in respect of the standard of instruction in the subjects leading to the Ontario secondary school diploma" (Section 16. (7), Education Act). Ontario private schools are not further held accountable by the need for any other legislative compliance, unlike public and separate schools, that must comply with the other 349 sections of the Education Act [2].

On August 12, 2005, Rieso Giacomo Pellegrini, the former operator of a Toronto, Ontario private school, St. James Academy, was convicted on 7 quasi-criminal counts under the Business Practices Act. The Ontario Court of Justice convicted Pellegrini of: (a) committing unfair practices under the Act; (b) misleading parents to believe he could deliver high school credits, when he was not authorized to do so; (c) misleading the parent of a child with autism that tuition was refundable, when it was not; (d) misleading a parent that tuition for his child would be transferred to another school after St. James Academy had closed, when it was not; and (e)

making a misleading statement about tuition refunds to a student from China, that was not honoured.

Other charges and convictions have also occurred. For example, on September 2, 2005, Cayuga Justice of the Peace Kerry Boon fined Glencairn Academy, a former private school, \$142,000, fined one company director \$17,000 and sentenced him to 60 days imprisonment, and fined another company director \$11,100, for multiple counts of failing to pay wages to employees, and of failing to comply with orders to pay, issued under the Employment Standards Act. Glencairn Academy owed a total of \$74,000 to 14 former employees who had worked for the school sometime between July 1998 and March 2003 [4].

On December 16, 2005, BDO Dunwoody, as the Interim Receiver appointed by the primary lender, announced the closing of Cedar Grove School, in Mississauga, as of December 30, 2005. The financing agreement between the school and the primary operating lender was in serious default, and a receivership order was issued against the school on September 27, 2005 by the Ontario Superior Court of Justice. BDO Dunwoody offered to keep the school open until June 30, 2005 (the end of that academic year), but only if the parents could collectively raise an additional \$400,000 above and beyond the amounts already paid by school tuitions, by Friday, December 16, 2005. That never happened, and the school closed, mid-year.

On August 17, 2007, Kathleen Miller, Head of Grey Gables School in St. Catharines, announced to families, by e-mail, that her private school of 160 students would be closing [5]. George Briggs, Executive Director of the Ontario Conference of Independent Schools, acknowledged that he had been aware of 'financial troubles', but registered families had not been earlier forewarned, even though 15 teachers had left, en masse, in 2005. With the start of the school year only 3 weeks away, 59 families had already paid from \$450 to over \$10,000 each for upcoming tuition. A further \$100,000 subsequently pledged by families was not enough to keep that school open. BDO Dunwoody, the interim receiver, advised the Superintendent in Bankruptcy that \$822,000 was owed to 108 creditors, and that the school would be permanently closed. Families were left without a school placement for their child, and were left out-of-pocket for any tuition they had already paid. As usual, the Consumer Services Branch of the Ministry of Government Services since received complaints, but little real recourse is available [3].

In all four cases, any timely accountability process failed. The convictions against Pellegrini and Glencairn and its directors did not result from any inspection conducted by the Ministry of Education. The Ministry was legislatively powerless, because St. James Academy had not requested any

inspection, because Glencairn Academy had already closed, because Cedar Grove School offered only elementary programming, and because Grey Gables School had not yet opened for the year. The convictions, instead, resulted from investigations conducted by officers from the Consumer Protection Branch of the Ministry of Government Services and from the Employment Standards Branch of the Ministry of Labour, long after St. James Academy and Glencairn Academy had both ceased operations, and long after the educational damage to the students involved had been done. BDO Dunwoody, as Interim Receiver, put approximately 250 Cedar Grove School students out on the street, five days after Christmas, and 56 Grey Gables School students out just three weeks before opening.

Although there was some form of ultimate accountability by way of punishment, judgment, and potential restitution, howsoever dissatisfying to those families and students affected, that accountability was neither timely nor preventative. Simkins notes that one of four key market accountability requirements is "an information system to inform customers about the nature and quality of the services they offer" [6]. Such an information system, if imposed as a matter of public policy and if proactively timely, can alert consumers of private school education services to discrepancies between hollow private school promises and authentic private school realities. Such an information system would have to include information related to fiscal responsibility.

In 2003, the Ontario Ministry of Finance last required a 'Statement of Information and Attestation' from all private schools then intending to offer the now repealed Equity in Education Tax Credit; a 50% provincial tax credit to Ontario families, crediting up to 50% of \$7,000 annually in private school tuition fees. That Statement of Information and Attestation required the following accountability information:

- the legal and operating name and address of the private school;
- a detailed description of the private school's academic program, and student achievement expected;
- a detailed description of the methods of assessment used to measure student progress;
- details of annual student evaluations;
- details of school measures to enhance student safety;
- details of the professional credentials of the private school's teachers;
- an express tuition and tuck refund policy;
- disclosure of the years of operation of the private school;
- disclosure of compliance (or not) with student health and safety legislation; and
- disclosure (or not) of financial statements.

In addition, the Statement of Information and Attestation also expressly contained the following consumer protection advisory: 'Parents and legal guardians can obtain information relating to their rights as consumers from the Ministry of Consumer and Business Services' web site. The Ontario Ministry of Finance was empowered to verify, by government audit, the information disclosed in each Statement of Information and Attestation, and was further empowered to publish same.

However, contemporaneously with the repeal of that Equity in Education Tax Credit came the end of any requirement for Statements of Information and Attestation, together with the end of government audit controls ancillary thereto. That accountability baby was, perhaps accidentally but nevertheless, thrown out with the politically distasteful tax credit bath water.

In Arizona, Massachusetts, and Michigan, privatized charter schools are held accountable in four key areas: governance and reporting, curriculum and assessment, personnel, and fiscal responsibility. Kuchapski's accountability framework suggests the demand for accountability be operationalized with reference to three principles: transparency of operations, disclosure of information, and opportunities for redress [1]. Ontario's current private school accountability practices suggest deficiencies in these key areas. The purpose of this study was to investigate accountability in private schools in Ontario.

## 2. Research

Private school principals were invited by email to participate in an on-line survey (SurveyMonkey) consisting of 36 questions that included a focus issues of transparency, disclosure and redress, as well as the greatest challenges private school face with respect to accountability. One hundred and fourteen responses were received. The responses will be tabulated in December 2009.

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# Measuring Academic Behavioural Confidence: A Comparison of First-year Students at the Central University of Technology, Free State

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## Abstract

*This study assessed the academic behavioural confidence of first-year students enrolled in three B.Ed. (FET) programmes offered by the School of Teacher Education at the Central University of Technology, Free State. The Social Cognitive Theory is the overarching theoretical framework of the self-efficacy construct and therefore also for this study. A quantitative approach was followed and the Academic Behavioural Confidence scale (ABC) designed by Sander and Sanders, was adopted for use in the study. The study sought to determine whether a significant difference in the academic behavioural confidence of the first-year students within the Natural Sciences, Computer Science, and Economic and Management Sciences programmes does exist. A statistically significant difference existed in the ABC levels of students between the programmes. However, no statistically significant difference existed between male and female students within and between programmes. Based on the findings, some recommendations on dealing with first-year students have been made.*

## 1. Introduction

The academic confidence of learners is influenced by a number of factors which can be found both inside and outside the school environment. Regarding mathematics as a specific subject domain, learners make judgements about their mathematical capabilities based on accumulated knowledge and experiences. Based on these judgements students tend to see themselves as either mathematically inclined or disinclined. Student perceptions of mathematics efficacy are shaped by a number of personal, environmental and behavioural factors. They make judgements about their capabilities based on comparisons of performance with peers, successful and unsuccessful outcomes that are based on standardised and authentic measures, and feedback from teachers, parents and peers. These sources of information about their capabilities accumulate

within individuals to form perceptions of mathematical competencies [10].

Gender effects in mathematics learning and mathematics self-efficacy have also been reported. Confidence in learning mathematics has consistently emerged as an important component of gender-related differences. The self confidence of girls in mathematics has been reported to be lower than boys [6]; [15].

## 2. Related work

This section presents the theoretical framework as well as the key concepts that are used in this study.

### 2.1. Theoretical framework

The study is grounded on Bandura's Social Cognitive Theory. The Social Cognitive Theory is the overarching theoretical framework of the self-efficacy construct [1]. Through this theory, Bandura advanced a view of human functioning that accords a central role to cognitive, vicarious, self-regulatory, and self-reflective processes in human adaptation and change [9]. It views people as self-organising, proactive, self-reflecting and self-regulating rather than as reactive organisms that are shaped and shepherded by environmental forces or driven by concealed inner impulses. From this theoretical perspective, human functioning is viewed as the product of a dynamic interplay of personal, behavioural and environmental influences. This three-way interaction of behaviour, personal factors and environmental influences or situations is called the "triadic reciprocity" [1]. Within the classroom setting students' academic performances (behavioural factors) are influenced by how learners themselves are affected (cognitive factors) by instructional strategies (environmental factors), which in turn builds itself in a cyclical fashion.

All the thoughts that affect human functioning, and standing at the very core of the social cognitive theory, are self-efficacy beliefs [9]. The next section looks at self-efficacy beliefs.



## 2.2. Self-efficacy Beliefs

Self-efficacy beliefs are defined as “people’s judgements of their capabilities to organise and execute courses of action required to attain designated types of performances” [1]. Self-efficacy beliefs provide the foundation for human motivation, well-being, and personal accomplishment. It is also a critical determinant of self-regulation. Self-efficacy is also defined as “the belief in one’s capabilities to organise and execute the courses of action required to manage prospective situations” [4] as well as people’s confidence in their ability to do the things that they try to do [8]. The ideas that come through in these definitions are one’s judgements, beliefs and confidence in one’s abilities to perform a particular task. The key contentions regarding the role of self-efficacy beliefs in human functioning is that “people’s level of motivation, affective states and actions are based more on what they believe than on what is objectively true” [5]. How people behave can often be predicted by the beliefs they hold about their capabilities rather than by what they are actually capable of accomplishing, as these self-efficacy perceptions help determine what individuals do with the knowledge and skills they have [9].

However, people’s self-efficacy beliefs should not be confused with their judgments of the consequences that their behaviour will produce [9]. They, however, do help determine the outcomes one expects. Confident individuals anticipate successful outcomes. Students who are confident in their social skills anticipate successful social encounters, while those who are confident in their academic skills expect high marks in examinations and expect the quality of their work to reap personal and professional benefits. The opposite is true of those who lack confidence. Students who doubt their social skills often envisage rejection or ridicule even before they establish social contact. Likewise, a lack of confidence in academic skills could lead students to anticipate a low grade or pass in a particular subject or course. Because individuals operate collectively as well as individually, self-efficacy is both a personal and a social construct. Collective systems develop a sense of collective efficacy, that is, a group’s shared belief in its capability to attain goals and accomplish desired tasks. Schools develop collective beliefs about the capability of their learners to learn and of their teachers to teach. As a result of shared beliefs, schools enhance the lives of their students and teachers by creating environments conducive to the desired tasks.

Organisations with a strong sense of collective efficacy exercise empowering and vitalising influences on their constituents [9].

## 2.3. Academic confidence

Some authors use the terms confidence and self-efficacy interchangeably [5], while some argue that the two concepts are distinct but related [11]. They see academic confidence as a new construct which is distinct from its parent concept, self efficacy. Academic confidence, therefore, has its theoretical foundations in Bandura’s work of self-efficacy. Academic confidence is seen as a mediating variable between the individual’s inherent abilities, their learning styles and the opportunities afforded by the academic environment of higher education [11]. In their comparative study of two distinct groups, namely Medical and Psychology students using an Academic Confidence Scale (ACS), Sander and Sanders concluded that the scale could be used to identify students who are not coping well with a course of study as well as in the exploration of the impact of teaching and learning method. We now look into academic behavioural confidence.

## 2.4. Academic behavioural confidence

Academic behavioural confidence (ABC) is conceptualised as how students differ in the extent to which they have a strong belief, firm trust, or sure expectation of how they will respond to the demands of studying at a higher education institution [11], [12] ABC is distinct from the academic performance aspirations that students may have, although the two may be related to some extent. This confidence applies to the demands of the course as a whole rather than to individual module specific issues where self-efficacy measures would be more appropriate.

The ABC scale was developed for use as a survey instrument to assess the confidence that higher education students have in their own anticipated study behaviours in relation to their degree programme. It was developed within an ethos of using survey techniques to try and understand students within the large student groups that many higher education lecturers have to teach. The main argument raised for its use was that with large classes, there is little or no opportunity for the informal interactive discourse possible within small groups and which allows the teacher to understand his/her students or help and guide them by effective teaching [12]. This argument holds true for this particular study as well. Lecturers have to deal with

large groups of students who come from different home and school backgrounds. The transition from high school to higher education could prove to be a traumatic experience for some.

From the literature we deduce that students form self-efficacy beliefs about their own capabilities. These beliefs are reinforced by past experiences-school, teachers, parents and peers. The beliefs they have about themselves are related to their level of confidence which could be used as a predictor of their academic performance in later years, including academic performance at universities. Gender differences have also been linked to self-efficacy beliefs and academic performance. It is therefore, against this background that the study was undertaken to explore the differing levels of academic behavioural confidence among three first-year student groups enrolled during 2009 in the School of Teacher Education at the Central University of Technology, Free State.

### 3. Research rationale

The study focuses on the following research questions:

- Is there a significant difference in the academic behavioural confidence of the first-year students within the Natural Sciences (NS), Computer Science (CS) and Economic and Management Sciences (EMS) programmes in the School of Teacher Education at the Central University of Technology, Free State?
- Is there a significant difference in the academic behavioural confidence between male and female students within these three programmes?

### 4. Hypotheses

The following overarching hypothesis was advanced:

There is a significant difference in the academic behavioural confidence of the first-year students within the Natural Sciences (NS), Computer Science (CS) and Economic and Management Sciences (EMS) programmes in the School of Teacher Education.

The following are the specific hypotheses:

- The students enrolled in the Natural Sciences (NS) have greater academic behavioural confidence than those in Computer Science

(CS) and Economic and Management Sciences (EMS).

- Male students will have greater academic behavioural confidence than their female counterparts.

### 5. Research methodology

The study has followed both a literature study and quantitative research. It is an exploratory and descriptive survey of the perceptions of the first-year students enrolled in the Natural Sciences, Computer Science, and Economic and Management Sciences programmes in the School of Teacher Education at the Central University of Technology, Free State.

The Academic Behavioural Confidence scale (ABC) designed by Sander and Sanders was adopted for use in the study. This scale is a Likert-type scale consisting of 24 items divided into six categories, namely: studying, understanding, class attendance, attaining good grades, voicing out one's feelings and seeking clarification when a student does not understand the lesson.

The ABC scale was used as it had already been tested for internal reliability by its developers. The researchers wanted to determine if the scale, when used in a different context, could yield similar results, as some problems addressed in the scale are context-specific. Minor adaptations regarding the wording of certain statements as well as the reduction of the response categories, were made to comply with the purpose of this study. Statements addressing common areas were also grouped together. The adapted scale was then used as an instrument to collect data from first-year education students in the three mentioned programmes. Academic behavioural confidence was measured on a three-point Likert-type scale comprising categories "Very confident", "Slightly confident" and "Not confident". The scale was administered to the students at the beginning of February 2009. This time at the beginning of the year was chosen as the registration of new students had been completed and it was felt that all students had settled in their class groups according to a given timetable. The questionnaire was administered immediately at the end of a lecture which the whole programme group had to attend and was collected directly after completion.

### 6. Findings

In analysing the student responses the following values were used: very confident=1, slightly confident =2 and not confident=3. A lower value

therefore indicates more confidence than a higher value.

### 6.1. Biographical Information

The Table 1 provides a breakdown of the analysis of respondents according to gender and programme.

**Table 1. Gender of Respondents (N=315)**

Gender	NS N=86	CS N=80	EMS N=149	Total
Male	58	33	54	145 (46.03%)
Female	27	47	95	169 (53.65 %)
No resp.	1	0	0	1
Total	86	80	149	315

The Table 2 presents data on the means and standard deviations of the three groups in the study.

**Table 2. Summary of ABC scores for the 24 statements for the three groups**

Prog	Mean score	SD	Min	Max	Median
NS	1.41	0.2	1.1	1.78	1.37
CS	1.44	0.22	1.09	1.78	1.44
EMS	1.51	0.26	1.06	1.95	1.49

From Table 2 it can be deduced that the students in the Natural Sciences programme are more confident than the students in the other two programmes. Further tests of significance, however, had to be performed.

### 6.2. Tests of significance of ABC scores among the three groups

Two groups at a time were compared as follows:

- The t-test was used to compare the means obtained from the NS and the EMS groups. The t-value was found to be  $t=3.0786$  at a 95% confidence level (with p-value = 0.0023) and degrees of freedom equalling  $df=233$ . It was therefore concluded that there was a very

statistically significant difference in the mean confidence scores of the two groups.

- A similar procedure was done for the CS and EMS groups. There was a statistically significant difference between the mean scores of the CS and EMS groups (at 95% confidence interval,  $t=2.0462$ ; and  $p=0.0700$ ; and degrees of freedom,  $df=227$ )
- There was no statistically significant difference between the mean scores of the NS and CS group (at 95% confidence interval,  $t=0.9203$ ;  $p=0.3588$ ; and degrees of freedom,  $df=164$ ).

### 6.3. Analysis of responses of individual students

The responses of individual students to the 24 statements are shown in the Table 3.

**Table 3. Student responses for 24 statements per programme**

Prog.	High mean value (Low confidence)	Low mean value (High confidence)	Range
NS	1.96	1.00	0.96
CS	2.13	1.00	1.13
EMS	2.33	1.04	1.29

The confidence means of NS group varied between 1.96 and 1.00, giving a range of 0.96. That of the CS students varied between 2.13 and 1.00, with a range of 1.13, while the EMS students had a range of 1.29. Therefore the EMS group showed a wider spread of mean scores than the two groups.

### 6.4. Tests of significance for individual statements

Although the students in the Natural Sciences group were shown to be more confident than those in the EMS group in 21 out of the 24 statements from the questionnaire it was only in six of these statements (2, 8, 14, 15, 21 and 22) where the difference between the means was statistically significant. The differences between the means obtained in statements 8 and 22 were considered "Extremely Statistically Significant", while statement 19 was deemed "Not quite Statistically Significant". According to the results in Table 3, the EMS group appeared to have displayed more confidence in statements 4, 5 and 24, although the

t-test for significance proved no significant difference between the means for those statements between the two groups.

Although the CS student group showed more confidence than the EMS group in 19 of the 24 statements in the questionnaire, it was only in the three statements (8, 14 and 21) that the mean difference was thus considered to be statistically significant. It should be noted that the difference in statements 8 and 14 was also found to be statistically significant between the NS and EMS groups as well. Although the EMS group showed more confidence in statement 23, the difference was however, found not to be quite statistically significant.

The CS group showed more confidence in twelve of the 24 statements than the NS group. The NS group showed more confidence in eleven of the 24 statements than the CS group. But, however, a statistically significant difference between the means was found in only three statements, namely, 15, 22 and 23, and where the NS group showed more confidence. We can thus conclude that the confidence levels of the students in these two programmes are more or less similar, although the overall mean confidence of (1.41) for the NS group indicates that they are slightly more confident than the CS group. We now look into gender differences between and within the three groups.

## 6.5 Gender differences in the academic behavioural confidence

The t-test was used to compare the means of male and female students obtained from the three groups. The t-value of the NS group was found to be  $t=0.0008$  at a 95% confidence level (with  $p\text{-value} = 0.05$ ) and  $df=83$ . The t-value of the EMS group was found to be  $t=0.1998$  at a 95% confidence level (with  $p\text{-value} = 0.05$ ) and  $df=147$ . The t-value for the Computer Science group was  $t=0.0718$  at a 95% confidence level ( $p=0.9430$ ) and  $df=78$ . Neither differences, between the means of the male and females, in the three groups were found to be statistically significant, however.

## 7. Conclusions

The results of this study point to differing levels of academic behavioural confidence between the students in the three programmes. It was hypothesised that the NS group would be more academically confident than the other two groups. This was confirmed by the differences in the means of the three groups (1.41 for NS, 1.44 for CS and

1.51 for EMS). This difference was found to be very statistically significant between NS and EMS and statistically significant between the CS and EMS student groups. There was however, no statistically significant difference between the NS and CS groups.

Because there was a very statistically significant difference between the NS and EMS groups a further analysis of student responses became necessary. Such analysis showed a statistically significant difference between the means of the two groups in only six of the 24 statements, that is, statements 2, 8, 14, 15, 21 and 22. Between the CS and EMS groups a statistically significant difference was found in three statements that is 8, 14 and 21.

The six statements in which the NS group showed more confidence than the EMS group, and in which the difference was deemed statistically significant, are the following:

- prepare thoroughly for lectures and tutorials;
- follow the thread of explanation provided by the lecturer during the lecture;
- manage my workload to meet the coursework deadlines;
- give a presentation to a small group of fellow students;
- produce good results under test and examination conditions; and
- write in an appropriate academic style.

Although the NS group appeared to be more confident than the EMS and the CS groups, there are still those students, even in the NS group, who were found to be only slightly confident or not confident at all. Academic support is needed in order to boost their academic confidence as academic confidence mediates between the individual's ability, learning styles and the academic environment of higher education [14]. Through guidance and support from lecturers and other institutional structures, students can be helped to adjust quickly to the demands of higher education.

Students in EMS programme appear to have difficulties in all six categories into which the 24 statements were grouped, namely: studying; understanding; attendance of classes; attaining good grades; voicing out their feelings and seeking clarification when one does not understand. The fact that they showed more confidence in statements 4, 5, and 24 (although the difference was not statistically significant) could be an indication that they are aware of their deficiencies

and are prepared to attend lectures regularly. These statements were: attending most lectures; be on time for lectures; and make the most of the opportunity to study for a degree at the university. Attending lectures only is not enough, though. Students need to have the confidence to study, to understand, to ask for help when it is needed and to speak out about their problems.

The following recommendations were made:

- Lecturers should vary their teaching methods to cater for all student groups.
- New students should be given a pre-test that will serve as a diagnostic tool to assess their level of understanding of mathematics as well as other subjects in a particular programme.
- Students' learning style preferences should be assessed and lecturers should be prepared to adjust their teaching methods to cater for all student groups.
- Further academic behavioural confidence tests should to assess whether there has been improvement during the course of the year.

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# The Effect of Using Virtual Classroom Discussions on the Oral Interaction Skills and Social Values of English Graduate Students in Jordan

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## Abstract

*This study aims at investigate the effect of using the virtual classroom discussions on improving the oral interaction routines of English major graduates' at Princes Alia University Collage (PAUC) which is a branch of Al-Balqa' Applied University, and on their ability to acquire positive social values. Randomly, (50) participants will be involved. The study will develop two observation checklist instruments. The first will observe the participants' performance; it will consist of four major arts: ways of taking-turns, topicalizing behaviors, repairs, and adjacency pairs. The second one will examine the students' social values development with a focus on the democratic ways of debating during oral interacting. There are other procedures insure the high level of accuracy in collecting and analyzing data. The study will be carried out in first semester of the academic year 2010/2011.*

## 1. Introduction

The universality of English cannot be denied nowadays. That is why English has become a compulsory component of education in many countries outside those speaking English. At many schools and universities, English is chosen as a compulsory subject for students as English is considered to be a useful tool to access the world knowledge. It has also become one of the major fields for university students around the world. This trend also applies in Jordan. However, though the importance of English, how it is taught can often be questioned particularly for students who got specialized in. one of the most important skills in language learning is the oral aspects by which most people communicate. However, there is an apparent weakness in this regard either it was in learning or teaching oral skills. Moreover, learning the oral skills using the target language should bear the possibility of learning the culture of the target language including the social values. In other words learning oral skills could be strongly related to acquiring values as democratic communications and discussions.

The poor quality of teaching speaking skills at university level, in many countries including Jordan,

results in a large number of graduates who have difficulty with communicating English. Utilizing technology into teaching methods may be promising as a fundamental practice in teaching EFL, where it is available and accessible. Suggestions of using Computer Mediated Communication (CMC) in teaching oral interaction skills are put forward to improve students' achievement in this regard. Moreover, it is believed that using enhanced technological solutions such as Virtual Classroom (VC) may provide ESL/EFL instructors with a rich opportunity to improve their graduates' communication skills. Such classrooms may also help in the integration of the target language culture in students' learning process.

A group of reasons led to the poor quality of teaching English in Jordan as one of many developing countries. Those reasons may include the budgetary constraints, classes with too many pupils, inadequate teaching materials and badly trained or paid teachers. Such reasons resulted in the use of English diverging further from the proclaimed norm, while the demand for knowledge of English is crucial because of its high prestige, job requirements within the country, and its usefulness abroad [10].

At Princess Alia University Collage (PAUC), which is one branch of Al-Balqa Applied University (APU), English major students study English along approximately four years with relatively a large proportion of English compared to other subjects. The concern, however, is the quality of teaching in language education. This study will investigate the situation of teaching oral interaction skills at PAUC and focus on initiating an application of technology in order to improve students' English speaking abilities and the possibility of promoting their social values. More specifically, the study will investigate whether the virtual classroom discussions may enhance students' oral interaction skills and their democratic debates within these discussions.

The instructor's motivation has been considered a significant factor in developing students' speaking abilities [8] and in speeding up or slowing down the language development of students [6]. The lack of such important factor pushes toward looking for creative methods as virtual classroom discussions and web-based instruction that may be an effective tool and a real compensation for that role.

Another element that should be mentioned in this respect is the mixed-ability-student in Jordanian classes. Generally speaking, students have different backgrounds of English; some have studied English for several years and learnt an acceptable standard frothier major, but others know nothing about English [5]. Different levels of ability amongst students mean more challenges to their lecturers in English major classes. Finding a balance in communication with these groups of students during lectures is not an easy job for teachers.

The only useful facilities employed in classrooms nowadays are text books and a tape recorder. Most teachers simply do not know and are not trained to use other equipment such as a computer as a teaching aid. Oral skills at Al-Balqa Applied University are taught through three main activities: pronunciation, situational conversation and argument. When dealing with pronunciation, teachers simply turn on the tape to let students listen and get the meanings. Few teachers stop to explain to students the mechanism of turn taking, repairing or topicalizing behaviors. Consequently, students easily either forget the correct way of interacting orally or given poor practices in acquiring both appropriate oral skills and democratic use of interacting orally. Situational conversations are known to be practiced with little motivation from lecturers, creating modest cooperation between students. When the cooperation is poor, many teachers tend to ignore developing argumentation because they often fail when they try. Teachers, themselves, argue that they should spend time teaching micro-skills instead, as these skills help students get high marks in their exams.

It may not be the lecturer's fault to reach such situation in the field of teaching speaking skills for English major students at the university level, but the fault of syllabus designers who may not aware of the significance of speaking skills as it helps students to develop and make sense of their communication, their self esteem, their confidence for the outside world [13] and their better acquisition of social values accompany language learning such as democratic thinking and behaving in oral communications.

If such assessment is based on four skills equally, the situation may be different. However, it costs a lot of money and time to organize oral exams, which, according to many education managers, are not economical. Their point of view is being challenged by the current development of English within the country and in a world where technology develops rapidly, reducing global divides. With the development of technology as well as English as global language, humans across the world now can communicate easily with one another.

Looking at the nature of EFL learning, one will realize that these learners, as opposed to the ones with a mixed first language and cultural background

taught in English speaking environment (ESL), have considerably few opportunities to the language communicatively both outside and within the classroom among peers. This implies that the teacher is the only source learners have to communicate with, and as a result s/he is bound to correspond to the learners' expectations in terms of questioning and feedback. The need for this teacher-learner interaction is likely to be more demanding in a setting of Jordanian learners which reflects the desire of a Jordanian learner to interact using the target language medium. Such communication may also provide students with a good tool of questioning that is most important in oral interaction learning skills [4].

Questioning is reported as one of the commonly used strategies, and in some classrooms teachers use more than half of the class time exchanging questions and answers. Moreover, in studies exploring the contribution of teachers questions in second language classrooms, these questions play a crucial role in language acquisition. They can be used to allow the learners to keep participating in the discourse and even modify it so that the language used becomes more comprehensible and personally relevant [22]. Similar remarks were made in favor of providing feedback, emphatically to EFL learners. For example, such responsibility means that virtually everything you say and do will be noticed.

People are living in a technological era, so privilege belongs to those who can make full use of it. Therefore, using technological advances to improve students' oral skills could be available and an easy solution. Students' English should be considered useless if they cannot use it to communicate verbally. Moreover, as the concern of the study is the English major students, they should be pioneers in applying technological tools such as those allotted for oral skills development and social values integration.

Computer-mediated communication (CMC) has developed rapidly, especially in language learning. CMC is no longer human-computer interaction, but human-to-human interaction via the computer [23]. Therefore, CMC can be defined as "communication that takes place between human beings via the instrumentality of computers" [12]. There are two physical requirements that should be proposed for the aim of this study. First, class size should be no more than thirty students; twenty is ideal. Secondly, English lessons or at least speaking skills lessons should take place in language labs or computer labs which are available at PAUC.

CMC has been proved by many researchers to have a critical impact on University education and positive changes in face-to-face classroom interactions [3], [11], and has become a relatively easy-to-adopt tool for educators around the world [7]. Besides, CMC plays a crucial role in the field of

computer-assisted language learning (CALL), promising to enhance students' communicative competency [17], [18], [23]. Consequently, many academic journals have been issued to meet the development of CMC and CALL in learning and teaching language in general, English in particular. These include System, ReCALL, and Computer Assisted Language Learning (or CALL) and others. In the case of PAUC, CALL/or CMC can be easily used and available to improve students' oral interaction skills to implant them with new positive social habits such democratic values.

The second solution for practicing discussion and argument with CALL is to use synchronous environment: oral conversation online. Many scientists and scholars agree that in the information technology era of 21st century, web-based learning has become the major trend of future teaching and learning models [16]. While at the beginning CMC was restricted to text, audio conferencing has been commonly available since the mid 1990s, thus allowing remote users to communicate orally and synchronously with one another. "With the increasing availability of synchronous voice-based groupware and the additional facilities offered by audio-graphic tools, language learners have opportunities for collaborating on oral tasks, supported by visual and textual stimuli via computer-conferencing" [17]. Voice-based synchronous CMC is regarded as "a specific mode supporting conversations that are both different from face-to-face ones, and influenced in significant ways by the interactions of learners with each other, i.e. human-machine-human interaction".

Rosell-Aguilar adds that audio-graphic conferencing systems have developed into 'multimodal tools' including visual, verbal and written elements, which can improve communication and interaction [23]. A list of updated CMC research on audio-graphic online conferencing for language learning has been introduced.

Because of the availability of synchronous voice-based groupware, the idea suggested here is the use of Skype audio-graphic online conferencing for students to practice discussion and argument in English online. The Skype program can be downloaded for free from [www.skype.com](http://www.skype.com). Reasons for selecting Skype for training oral skill includes that it is free program, the quality of Skype's sound and image is excellent, much better than those of similar programs, such as Yahoo Messenger- the current most popular program for synchronous communication, it allows participants to send files (handouts) synchronously while discussing, without having to open emails, most importantly, it is easy to find native speakers or international students to invite them into the discussions via the search tool; and students of PAUC are English major students who may easily accommodate with such tools.

Besides, some other audio-graphic online programs, such as Wengo or Yahoo Messenger can be employed as a substitute.

It is ideal to cooperate with English native speakers and English learners around the world to invite them into the online discussions. This is not very challenging to lecturers because nowadays they can join English Teaching Associations in many countries to seek cooperation and exchange ideas. Then they can encourage their students to use Skype to communicate with one another person in the global language: English.

English lecturers are not simply competent in language, but also in task design and application of technology into teaching and learning. They should play the role of facilitator of the students' learning process, rather than teaching students.

The discussion in Skype now is named as a conference. The number of conference participants varies, depending on teachers' targets. Groups of three to four are often organized for discussion. Sometimes the whole class may be required to join if necessary. The process of an online audio-graphic conference is simple. It creates chances for non-native students to meet and discuss with foreigners in a real world. They can encounter different variations of English in the world, which make them aware of 'world Englishes' [15]. Joining such conferences, students have chances to meet and discuss with students in the world. Hence, they can improve not only their English communication, but also open their minds to the world.

Many trials with exploratory learning activities and educational programs via CMC are proceeding [2]. Therefore this study will attempt to develop an educational program about the use of technology namely virtual classrooms discussions. Such program may promote collaborative learning activities that examine this technology through interfacing between graduate students with each other via websites [9].

And thus the students may gain curiosity and interest in using technology and get involved in developing their own oral interaction activities. The goal here then is to expose students to authenticity in the learning experience derived from developmental and pragmatic sources of knowledge attained through the medium of an online collaborative learning environment. In this context such educational program for stimulating oral activities among students is expected to provide students with rich opportunities to develop their speaking skills, learning habits and styles and social values including conducting democratic debates and dialogues. Moreover, using the web may provide students with more learning resources that are related to their field of study through looking into further online collaborations with native and nonnative speakers. One other main feature of this educational program



is to improve the students' understanding of the emerging technological use in English classrooms.

The study will hold lectures and discussions to exchange opinions among students about topics of their interest and related to the language study. Therefore, it is expected that students, in this program will be able to speak freely with each other and they will be encouraged to hold conference meeting with those they have never met before in other countries.

## 2. Research rationale

Establishing oral classroom interaction is one of the main aspects of any successful EFL classroom environment since most transactions are mainly oral. However, this interaction should not only be dominated by instructors as it is the case in most EFL classrooms in Jordan. Many EFL lecturers in Jordan often claim that students are unable to initiate discussion or interact successfully due to their limited proficiency in English. They sometimes use students' low scores on speaking tests to support this claim. However, results of some local studies such as Nawwas, Al-Samhour, Abu Helu and Mohammed showed that many English university classes in Jordan lack both communication and free interactions, and students do not have enough chance to practice English language orally at class [1], [19]. This might explain why many EFL students and instructors are frustrated by the low level of oral communication or participation in the EFL class. On the other hand, weak oral interaction takes place at university level in general and at English major classes in particular lack the necessary integration of social values of the target language.

Therefore, the problem of this study stems from two major assumptions: the first is related to the argument that most Jordanian English major students graduate with oral interaction skills that are not up to the standards. The second assumption is related to the social values that accompany oral interaction in the language classroom. At a time some believe that virtual classroom interaction and using technology can enhance social values such as democratic thinking and democratic speaking practices among graduate students, others are convinced that such tools may not contribute to students' development in this regard.

For these reasons, the researcher found that it would be useful to investigate the role of virtual classroom in general and virtual oral communications through the use of web-based instruction in particular in the students' over all development in oral interaction skills and the development of their social values. More specifically, the study attempt to find out whether the use of most modern technologies such as the virtual classes can improve the student turn taking,

topicalizing behaviors, repair and adjacency pairs, in addition to the democratic use of communicating oral messages in English.

## 3. Purpose and questions of the study

The purpose of this study is to investigate the effect of using the virtual classroom discussions on improving the oral interaction routines of English major graduates' and on their ability to acquire positive social values. Therefore, the following two main questions are addressed:

1. To which extent can the virtual classroom discussions improve English major students' oral interaction skills (turn-taking, topicalizing behaviors, and repairs)?

2. To which extent can the virtual classroom discussions provide English major students' with new positive social values such as democratic habits?

## 4. Significance of the study

Many studies have been conducted in the field of teaching oral skills in English as a foreign language in Jordan. However, the virtual classroom discussion has not been used in the universities in Jordan as far as the researcher knows.

Therefore, it is expected that the findings of this study will shed light on the effect of using this technique in developing the oral interaction skills of EFL major students and their acquisition of new positive social habits such as democratic thinking and behaving in oral communications. EFL lecturers may also find the results of this study empowering to try other ways of making the teaching of oral communication skills more interesting, responsive to students needs and fun. As for English curricula planners and text book authors, the findings of this study may indicate whether the oral interaction activities available for EFL major are appropriate and enough to achieve the prospective goals, or they need more emphasis.

## 5. Method of the study

This study will involve (50) participants who are already enrolled as English major graduates at Princes Alia University Collage (PAUC) which is one branch among other thirty two public collages followed Al-Balqa Applied University. These university collages spread in the four directions of Jordan. This stratified sample will be represented to the population of the study with a 15% at least as expected according to the available records of students at Al-Balqa Applied University for the academic year 2008/2009.

In order to achieve the purpose of the study, the following procedures will be followed. First, the

researcher will assure the formal approval on conducting the study. Then the sample will be assigned randomly from PAUC. The study will also develop two major instruments to collect data: one will be an observation checklist by which students will be observed before and after conducting the experiment. In other words, students' performance will be audio-and/-videotaped during their assigned oral interactions on-line and during the lab discussions in English classes.

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The checklist will consist of four major arts: ways of taking-turns, topicalizing behaviors, repairs, and adjacency pairs.

The second instrument will be another observation checklist that will examine the students' social values development with a focus on the democratic ways of debating during oral interacting.

Both instruments will be validated by a jury of experts at a group of universities in Jordan and abroad. Then the researcher will establish an acceptable level of credibility for both instruments. In order to ensure such level of credibility, the two instruments will be experimented on a simple out of the study design.

In order to achieve high level of accuracy in collecting and analyzing data, another expert in the field will participate in observing the assigned classes. Then the study will follow a mixed method in analyzing data. This means the use of quantitative procedures in shedding light on the development of students' oral skills as well as social values. Later on the researcher will use a qualitative method in analyzing the observations.

As soon as the analysis has been done, results will be presented in light of the related literature. This will be achieved with a hope to conclude fruitful

recommendations and teaching implication regarding the use of virtual oral classrooms and social development of English major students at the Jordanian context.

## 6. Limitation of the study

The results of this study may be limited and its generalizability may be confined to those English major students at the university level in Jordan. It may also be limit for the small number of the participants. One important limitation of the study is that all participants are female students. Therefore, where ever implications and recommendations appear by the end of this study, they would be limited to these categories of English as foreign language students.

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## **Session 19: Teacher Education, Education Policy and Leadership**

Learning Lessons from the Past: The 'Boy Problem' in Windsor, Ontario 1966-1972  
(Christopher J. Greig)

A Model of Good Leadership Programs for High School Students  
(Donald Lang)

A Study on Classroom Management Profiles of Preschool Teachers  
(Berrin Akman, Necdet Taskin, Mefharet Veziroglu)

Teacher's Experiences of their Teaching and Learning Environments and its Effect on their Work Performance  
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School-readiness: Connecting Executive Function with Emergent Literacy  
(Trelani Milburn, Rena Helms-Park, Sujin Yang)

# Learning Lessons from the Past: The 'Boy Problem' in Windsor, Ontario 1966-1972

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## Abstract

*From 1966 to 1972, Flintridge Elementary school located in Windsor, Ontario, Canada implemented a short lived gender reform plan to help raise boys' achievement. Fuelled by a 'disadvantaged boys' discourse, educators from Flintridge Elementary sought to address the educational needs of boys by resorting to single-sex classrooms, hiring more male teachers, and developing a more "masculinized" curriculum. Drawing on articles from the popular media, scholarly journals, and face-face interviews with ten educators directly involved in the gender reform, this small scale study reveals how administrators and teachers reproduced male privilege and relied on and perpetuated normalizing assumptions about gender. This paper concludes by suggesting that if the goal of today's educators is to help boys achieve academically and to promote gender equity, teachers must challenge social constraints that exist for many boys by actively engaging in questioning and interrupting normative assumptions of gender in themselves and others.*

## 1. Introduction

Today, single-sex classrooms are back in vogue. Fuelled by concerns over boys' underachievement compared to girls, school boards across Canada and internationally [11] have embraced single-sex settings as a method to address the educational needs of boys. Yet, at a time when educators, school officials and policymakers across North America including those in Ontario [16] are considering proposals for expansions of single-sex classrooms from primary grades to secondary school in order to improve boys' learning, it seems remarkable that little if any work has examined boy-only settings within the Canadian context from a historical perspective. This omission is surprising as understanding lessons from previous efforts to segregate students seems timely and helpful. In this small scale study I unpack the short history of gender reform in Windsor, Ontario, a history that

reveals the ongoing and ever present concern among educators over the fate of boys, a fate that was, and is, closely tied to the maintenance and preservation of male privilege.

Drawing upon a range of sources including a data collection which consists of face-to-face interviews with ten educators significantly involved with Flintridge Elementary's 1966 gender reform plan, the purpose of this paper is to contribute to the growing body of evidence that demonstrates how single-sex classrooms are used as a method for upholding normalizing assumptions of gender [11]. These assumptions and the way they shaped teacher pedagogy and classroom curriculum at Flintridge Elementary generated unforeseen consequences which did not produce improved social and educational outcomes for boys. This suggests the need for today's educators to move beyond outdated, simplistic approaches such as single-sex classrooms in addressing the educational needs of boys, in order to help boys not only achieve academically but, more broadly, to lead more fulfilling and just lives.

## 2. The Participants

To better understand how gender shaped Flintridge Elementary's educational reform, in-depth personal interviews were conducted with ten participants directly involved in Flintridge's gender experiment. The ten participants interviewed in this study include: Bill, the school board superintendent who over saw the project; Gerry, who was one of the school's principals and a key administrator during the period under study; Ted and Mark, both vice-principals at different times during the reform; Susan, Emma and Ruth, the three female teachers who taught the girl-only classes; Allan, Mathew, and James, the three male teachers responsible for teaching the boy-only classes during the gender reform. The interviews were semi-structured with teachers and administrators being asked to talk about themes such as the rationale for the single-sex strategy, their memories of the gender

experiment, its effects on boys and girls, pedagogical and curriculum considerations that arose in the gender segregated classes. The interviews were collected using a digital recorder by the principal investigator and transcribed by a graduate student. Pseudonyms are used to refer to participants, the school, and others throughout this paper.

The theoretical support for the study came from the broader theoretical framework of sociology of gender, and schooling and gender [20]. In order to more deeply understand issues related to schooling and gender, theorists and historians of gender have long recognized the need to situate gender relations in their historical context. I turn now to briefly situating Flintridge's gender reform in its own historical moment.

### **3. The Historical Context: 1960s and 1970s**

Marginal gains or perceived gains of oppressed groups such as women and visible minorities have been followed by fierce backlashes against them. Certainly, as Rebick has pointed out, Ontario in the mid-1960s was a time when traditional oppressed groups began to organize and effect social change [15]. New and powerful forces emerged including the flourishing Women's Liberation Movement which ran alongside the rise of Black Power, Lesbian and Gay Rights and First Nation Rights movements. The establishing of The Royal Commission on the Status of Women in Canada in 1967, highlighted how gender inequities in general and sex role stereotyping in society were being challenged. Yet, despite or because of, the emergence of second wave feminism and the contestation of gender relations, one constant remained at Flintridge: the preservation and promotion of masculine privilege. In fact, both the implementation of single-sex classrooms in 1966 and the reestablishing of coeducation in 1972 were fuelled by a familiar backlash discourse which was motivated to a great extent by the same objective of maintaining male privilege.

Although the Flintridge experiment stands out as an exception in public schooling at that time in Ontario, it did not arise in a vacuum, but amid a political, social, and educational culture that had already expressed growing concerns over boys' underachievement in school. A review of some of the educational and popular literature discloses a number of articles with titles that reflect these concerns: "Are Teachers Fair to Boys" [14]; "Let's Give Boys' A Break" [13]; "School's Are Emasculating Our Boys" [18], and numerous other articles with titles less explicit deal exclusively with finding ways of

improving the school environment for boys. Conveying similar discourses found in today's literature on boys and schooling, the articles listed above implicitly and explicitly suggested that boys' were disadvantaged by an increasingly feminized society, in particular the school system [18]. In short, women and girls were imagined to have gained an advantage in the social, political and economic structure of society.

Any discussion over boys' achievement in school during the time period under study needs to recognize, then, the place of women, and by extension girls, in the overall social, political and economic structure of the time. Despite the emergence in the mid 1960s of second wave feminism, by all accounts, women were overwhelmingly disadvantaged compared to men economically, socially, and politically. Economically, the housewife was typical of many middle class women's occupation. Yet, by the mid 1960s one-third of Ontario's workforce was female, but was highly segmented by gender. Women, in particular working class women and women of colour, who were gainfully employed were segregated in a few positions that were considered feminine by tradition and that gave very little power and prestige, economically or otherwise to females [5]. In terms of political power, women were largely only sidelined participants and were not included in the formal political structure, a situation that appears largely unchanged today. Moreover, for all the girls supposed academic accomplishment and superiority compared to boys, the most successful high school graduates who did not go on to post-secondary education, 75-90 per cent were women [3]. As such, Flintridge's rationale for the experiment must be read in light of the highly gendered social, political, and economic context of that time when men and boys were enormously advantaged to women and girls in reaping the majority of the social, political, and economic benefits.

### **4. Flintridge Elementary School**

Opened in 1958, Flintridge Elementary school was located in a newly developing, predominantly white middle/upper-class neighbourhood situated in the south west area in the largely working-class city of Windsor, Ontario. Flintridge Elementary's gender reform experiment began in September of 1966 with an all-boys grade 1 class. An all-girls class grade 1 class was also established but was clearly derived from the move to boys' classes. In 1967-1968 the experiment with single-sex classrooms was expanded to Grade 2, and the following year was initiated in Grade 3. The reform

did not reach into the higher grade levels. Female teachers always taught the all-girls' classes. The all-boys' classes were taught mainly by male teachers, although a few female teachers also taught in these classes at different times.

## 5. The Rationale for Introducing Single-Sex Classrooms

Recent efforts among school boards to establish single-sex classrooms have been motivated by concerns over boys' academic underachievement, in particular in the area of literacy [6]. The desire among educators at Flintridge Elementary for introducing single-sex classes was also fuelled by concerns over boys' underachievement in school, in particular in the area of literacy.

The purpose was to improve the boys' interests, motivation, discipline, interactions, and enthusiasm. All of those things just to get them more involved in liking school . . . Another purpose was to improve [boys] reading ability, to improve their reading scores, to improve their achievement in all areas of language. We worked hard at that. (Allan)

Bill remembers the single-sex strategy was supported by the Flintridge Elementary principal of the day because he had noted that boys tended to have lower participation and performance rates than girls. Bill recalled that "twice as many girls got into the accelerated stream," while "twice as many boys were in the slower stream." Gerry commented, "that is how it got started, we talked about it and in my opinion and in many others, boys seemed to be having problems in the primary grades, the girls were a little more advanced than the boys." Mathew recalled that the local school board was concerned about the boys as the "girls tended to do better" academically. Foreshadowing the fascination that would gather around the fate of boys today the educators at Flintridge Elementary, if nothing else, shared one characteristic: a concern about the boys.

Were the educators at Flintridge Elementary alone in their concern over boys' achievement in literacy? During the 1950s and into 1970s, published articles in prominent academic journals identified boys' underachievement in reading compared to girls as an issue. An article published in the 1950 *Journal of Genetic Psychology* which investigated developmental trends in reading behaviour among public school children concluded that "girls as a group appear to be advanced over boys as a group at every stage of the reading gradient" [7]. The *Review of Educational Research* reported in their 1952 and

1964 reviews of research in reading in school that it was generally accepted that "girls are superior to boys in reading achievement in public school" [9]. Certainly, research confirmed time and again that boys were underachieving compared to girls, in particular in the area of literacy. But to what did many academics and educators attribute boys' failure in school?

A growing body of feminist work [4] did not prevent a discourse in North America from emerging which positioned boys as 'disadvantaged' compared to girls within the context of education. A report published in 1950 by The Canadian Research Committee on Practical Education, *Your Child Leaves School*, which had as its aim understanding the reasons why students, mainly boys, drop out of school, alleged that feminized school environments in Ontario and elsewhere were fuelling boys' early exit from school. Likewise, the 1962 *Ontario Journal of Educational Research* confirmed boys' underachievement and recited a familiar refrain. The study concluded that one characteristic that did not seem to change over three decades was the "apparent academic superiority of girls" [10]. Like other researchers of the day [8], these researchers typically located the source of boys' trouble in the high numbers of female teachers and feminized books, not in a structure of relationships of power. Arguments of this nature reflected a persistent fear that boys have been disadvantaged by feminized school environments. These fears persist explicitly in contemporary debates over boys and schooling.

Educators at Flintridge Elementary appeared to adopt the same rhetoric around the feminization of schooling. Susan, for example, suggested that boys' underachievement really was the "fault of the education system . . . because school was geared to the quiet little girl who paid attention." Allan, who mentioned that schools cater to girls who worked hard and "looked pretty" also captured what was really a widespread belief among most of the educators.

It was odd, they [Flintridge Elementary] were doing something for boys; whereas a few years later they did nothing for boys, for years and years, and they still don't. It was all for girls, affirmative action. Everything has been done for girls for years and years.

Obscured in the above statement is the fact that girls and women, in their desire to escape a history of gender oppression and exclusion in and out of school, have appealed at times to affirmative action; while the other desire for a version of affirmative action for boys, a desire that is also

explicit in current debates over boys and schooling, was and is born of a desire to retain the social, political and economic advantages for boys that have been produced by the same history. But while the rationale focused broadly on providing a justification for separating boys from girls, teachers readily modified the curriculum in very gender specific ways.

## 6. The Modified Curriculum

Educators at Flintridge Elementary modified the curriculum and pedagogical approaches. Similar to other male primary teachers such as his fellow colleague Allan, James, when recalling his approach to teaching an all boys' class, remembers that "boys' interests were really taken into consideration." For Susan, this meant basing some of her lessons on boy-baits such as hockey, baseball and cars. Most of the teachers of the all-boys class offered "a lot more hands-on activities" as it was widely assumed that "boys like to play with their hands." For James this meant "we had building materials, so we had the hammers going . . . we had woodworking benches that your regular primary class wouldn't have." Unlike Ruth who said that she did little to orient the curriculum to girls' interests, Emma recalls that teachers tried to "gear the curriculum" to the individual sexes including bringing "sewing and cooking" to the girls and saws and hammers for the boys.

Efforts were made by Flintridge Elementary educators to bring more male oriented readers to the all boys' classrooms. Gerry remembers teachers tried to "get books and readers that were male oriented, like sports books, car books." When addressing the issue of boys' underachievement in literacy, Allan recalls using a basal reader in his classroom that possessed more "boy oriented or male oriented stories" in order to encourage boys to read. Susan recalls that reading materials of that time really were not "boy-oriented." Despite the teachers best intentions, such attempts to bring more "boy-books" that included more male characters into class failed to recognize the way in which elementary school textbooks in Flintridge disproportionately represented males more often than females [3].

## 7. Male Teachers and the Disadvantaged Boy

Educators' concerns about the over abundance of female teachers, and the lack of male influence in boys' lives under pinned Flintridge Elementary's gender reform. In fact, Ruth recalled that the

concern around absentee fathers was a prime reason for recruiting a male teacher for the boys: "There wasn't a male presence in the home, so the boys didn't have a male influence. With a male teacher, they would have a young male influence at school." Among teachers of both sexes, then, there seemed to be a strong belief that more men in elementary schools could offset or counter this social problem. In fact, according to one of the administrators, the experiment was wholly "contingent upon finding a man to teach [all-boys] grade 1 class." Yet, while boys-without-fathers was a general concern, the worry was more specifically driven by social class, in particular fears about working class, mother-led households. Mark, the vice-principal, remembers that the concern about absent fathers was motivated largely by a population of children coming from the homes of the working poor who lived in or close to Tin Can Alley. Mark explained: "Mostly welfare mothers and their kids. They were very needy children. I think this is one of the things that bothered Sam (principal) they [the boys] don't have a father image. And, so they pursued segregated classes." Fast forward four decades later, and one teacher from Thunder Bay, Ontario states in very similar terms that "male teachers are often dad for the day with boys from single parent (female) families, so a male teacher may be the only male that boys from those families can talk to" [12]. This on a small scale, then and now, is nothing less than the soft-pedaling of traditional gender roles, redressing a perceived imbalance between the under-influence of fathers and over-influence of mothers while reproducing normative gender behaviour.

## 8. Reproducing Normative Behaviour

Teacher tales about the segregation of the sexes demonstrated a pattern that both reflected and reinforced rigid understandings of girls' and boys' behaviour. Like most of the participants, Susan conceded that girls' classrooms were much "quieter and [the girls] better able to work independently away from the watchful eye of the teacher." As a principal, Gerry remembers observing that "the girls' class was a quieter classroom. More controlled," adding that the "boys' class was kind of free, letting the exuberance and enthusiasm come out." In a similar way, Ruth remembers "the boys were very gregarious, happy and noisy . . . the girls were regimented, quiet, and prim and proper." A photograph published in the local paper, which publicized Flintridge Elementary's gender experiment used the term "prim and proper" as a way to describe the all-girls' class. This provides some



evidence for Faludi's assertion that in instances when traditional understandings of gender are being reinforced, images of the "restrained female" proliferate within culture [1].

In 1963 Betty Friedan's *The Feminine Mystique* heralded the birth of a new wave of feminism. Despite this new wave of feminist thought, Emma discusses and illustrates the powerful way gender socialization and traditional understandings of gender shaped classroom behaviours.

So, one day I was going to get the film projector to show them a film. I said to them [the girls] that there was work to do, I will be gone for a few minutes. I left the room. Well, when I got to the room where the film projector usually was, it wasn't there. So, I went around the school to find the film projector. The principal saw me go down the hall, but I hadn't come back. So, he [Fred] went down to check on my room. On my way back he [Fred] said, 'I have never seen anything like it in my life. All these little girls sitting in their seats working away...singing away doing their work. Not one of them out of their seats, singing away doing their work.'

While girls' "prim and proper" behaviour was lauded, the "rough-housing" and "rambunctiousness" of the boys was allowed and even fostered by teachers in the boy-only classrooms, which raised the eyebrows of some of the other staff. James, for example, remembered some of his colleagues "thought we allowed too much rough play or too much physical activity." Yet, this brand of hyper masculine behaviour, validated and socially sanctioned by the gendered landscape of the school, would ironically contribute to the experiment's collapse. In short, Flintridge Elementary would reap what it sowed.

## 9. Flintridge and the End of Single-Sex Classrooms

The end of single-sex classrooms at Flintridge Elementary in June of 1972 was brought about both by unintended consequences and decreased student enrolment. According to Bill,

Once the enrolment started to go down, and then you have a choice. Are you going to have a boys' split 1 and 2 and a girls' split 1 and 2? You don't get nearly the kind of amount of support when that's what you are faced

with. And then we went to that point where it would just be totally impossible and you would have to run a rural school if you were going to do that.

With fewer students enrolling in Flintridge Elementary, there just were not enough children to separate into two gender-separate classrooms.

Unintended consequences of the experience of gender reform also led to the ending of single-sex classrooms. Unexpectedly for the educators at Flintridge Elementary, educating boys separately seemed to increase aggressive behaviour among the boys. Emma, for example, recalls the experiment ending because "we had the feeling that the boys were too aggressive . . . they figured that they could settle everything with their fists." Susan remembers that there was an emerging concern among some of the teachers and administrators that the boys from the boys-only classes "became too aggressive." But it wasn't just aggression between and among the boys that was cause for concern. Educators also grew concerned that boys were developing a misogynist attitude, as one administrator put it: "in the all-male class, boys have very strong feelings against girls . . . and this could present difficulties when the boys are returned to mixed class."

Ironically, the contrast between boys' underachievement and girls' academic success fuelled the move *back* to coeducation, an outcome that many Flintridge Elementary educators were not "prepared for" (Susan). Gerry recalled thinking at the time that what "really struck me" more than anything else was the success of the girls. "The girls" Gerry remembers, "advanced more rapidly than they would have in a mixed class. The girls' class went nuts! The boys did very well; but the girls just outstripped them." When it came to academic achievement, Ted recalls that the girls "just shone."

But why would girls' academic success fuel a move back to coeducation? The answer emerges in a recent letter sent by a retired administrator to the editor of a local paper, stating that "the experiment was stopped because when the classes integrated in Grade Four the girls would have been too far ahead of the boys to have compatible groupings" [19]. If this was the case, then it is not hard to see how coeducation became a method to prevent girls from succeeding further. Certainly, the sentiments expressed above reveal a subtle way in which male privilege remains unchallenged as the emphasis was no longer focused only on addressing boys' underachievement in academic matters, but also on undermining girls' success.

## 10. Conclusion

While Flintridge Elementary's single-sex reform most likely ended in June, 1972, concern about boys' underachievement and the allegation that schools have become feminized and a detriment to boys' learning stubbornly refused to die. The same year Flintridge Elementary stopped its single-sex reform an academic writing in the *Elementary School Journal*, wondered if a more masculinized curriculum, more male teachers or even separate classes for boys might help raise boys' achievement [17]. And again, two years later an article titled, "Wanted: A New Deal For Boys" reflected the persistence of this particular discourse:

The feminized school may make it difficult for boys to see school as an appropriate masculine activity. . . . Schools with their female-oriented value system and female domination have established a reward system in which success depends on conformity to feminine values and manifestations of maleness are met with punishment and failure. [2]

Our time period seems no better suited than the period under study in addressing the educational needs of boys. Time and again it has been in the wake of economic, social, and political change, when gender roles become contested, that concerns about boys' underachievement emerge and single-sex schooling is offered up as a solution. In this sense, we will avoid another spate of gender reform shaped by concerns over the "fate" of boys only if we understand the discourses that have shaped the past and continue to influence current experiments, and in so doing negate and imperil educators' opportunities to address the education of boys in a socially just and meaningful way. Until that happens, however, we as educators will remain our own worst enemies.

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# A Model of Good Leadership Programs for High School Students

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## Abstract

*High Schools are integrating leadership programs into their curricula, with increasing mandatory status. Anecdotal data from advanced academic teacher programs indicate teachers are handicapped in answering question, 'What is good leadership?' due to absence of coherent material that integrates notions of good, right, causality, reality, values, leadership. Two issues need clarification: what we are as humans and why we are. Traditional reference to religion, ideology is dysfunctional to helping teachers. Reason is appropriate alternative to enhance understanding difference between real good: that which perfects what any being has within its potential to be, for the betterment of that being and all beings interacting with it and apparent good: that which thwarts real good (another term for evil). Reason also enhances understanding of the difference between how we value and what we value. Leadership is philosophy-in-action as a consequence of purposeful conscience value-laden decision-making.*

## 1. Introduction

The purpose of this paper is to provide some assistance to teachers who are involved in school leadership programs. The attempt is to answer the question, 'What is good leadership?'

The paper is in three parts. Part One is a preamble, picturing teacher with a dozen students sitting in a circle discussing leadership issues. These issues begin with historical figure Alexander The Great. This is followed by contemporary broad social-based issues; these are followed by more local school-specific issues. The intent with these issues is to get students to think, verbalize and articulate what they consider relevant and meaningful components of leadership dimensions.

Hopefully, they will be able to bring to bear material from social science courses. These exercises will be considered successful if students leave the sessions with an awareness of the nuances of what constitutes 'good' leadership.

Part Two of the paper deals with literature relevant to leadership, with the primary focus being the meaning of good. The intent here is to provide teachers with relevant conceptual skills to deal with the distinction between 'real good' versus 'apparent good', which is another term for evil. Critical concepts: values, movement, perfection, reality, leadership, 'What are we?' 'Why are we?' Much of this is anchored in that historical question, 'What is it, if taken from a human being, that human being is no longer a human being?' In essence, 'What is the "it"?'

Every effort is made in Part Two to emphasize the significance of reason underlying the constructs being discussed. The overarching principle is Daniel J. Boorstin's ominous warning to those pursuing understanding, 'worse than ignorance is the illusion of knowledge'[1]. Hopefully at the end of the day, both teachers and students have sufficient confidence in their understanding of 'good' leadership that they can claim, 'I believe because I know' rather than 'I know because I believe.'

Part Three deals with question-answer exercises, such as conducting value audits, criteria for decision-making and moral-ethical distinctions.

## 2. Preamble: Teacher and a dozen students sit in circle discussing leadership

Think for a moment of Alexander The Great. Was he a good leader? We might be inclined to say yes because he is called 'Great'. He certainly accomplished a lot before his death at age thirty-two. And he had one of the greatest minds of all time as his teacher, Aristotle. Now give some thought to what Sir John Keegan, internationally recognized military historian had to say about Alexander the Great: 'His dreadful legacy was to enoble savagery in the name of glory and to leave a model of command that far too many men of ambition sought to act out in the centuries to come'[2].

In more recent times think of:

- Philip Gourevitch's account of seventeen high school girls beaten and murdered by

Rwandan mercenaries because these Hutu girls refused to separate themselves from the Tutsi girls. Gourevitch writes: ‘But mightn’t we all take some courage from the example of those brave Hutu girls who could have chosen to live, but chose instead to call themselves Rwandans?’[3].

- UNICEF reports that 7,000 fewer female babies are born every day in India because of sex determination. Professor Prabhat Jha, Rhodes Scholar, Research Chair of Health and Development, University of Toronto and founding Director of the Centre for Global Health Research, St. Michael’s Hospital, reports in 2006 that one in every twenty-five female fetuses is aborted in India [4].

- Flight 93 of 9/11 infamy was prevented from hitting its target, Washington, by the daring heroics of passengers with the last audio message being, ‘Let’s roll.’

- Seventy-six year old Liviu Librescu, an engineering and mathematics lecturer at Virginia Tech, blocks doorway preventing mad gunman Cho Seung-Hui shooting his students in Virginia Tech massacre, 16 April, 2007, in which 32 students were killed. Librescu, a holocaust survivor, died of gun shot wounds.

- Columbine Massacre.

- Malnutrition [5]. 148 million children under the age of five are undernourished; almost 10 million children under the age of five die each year from malnutrition.

- Exploitation. Child labor is a 10 billion dollar a year business; over a million children every year are sold into the sex trade as well as servants for the wealthy.

- Another Declaration. In the Fall of 2008, 140 countries signed a UN declaration against child exploitation noting that tens of millions of children are being abused for sex and pornography.

- Child soldiers. Over 300,000 children under the age of eighteen serve as child soldiers in armed conflicts in thirty countries; girls are forced to marry combatants, serve combatants sexually, and terrorize other children into joining the militias; many of these children are aged seven and eight.

- AIDS. In 2007, over two million children under the age of fifteen had AIDS; 290,000 died of AIDS; 420,000 became infected with AIDS; over fifteen million children under eighteen lost either one or both parents due to AIDS.

Can we make our own schools drug-free? Bullying problems? Gender-difference harassment problems? Gender issues in curriculum problems, especially at early grades?

### 3. Literature Review

Major concepts: What is it to be human? Humanity’s *raison d’être*, values, realities, notions of good and evil, movement, perfection, leadership.

#### 3.1. Essence of being human

Essence is that which causes a being to be what it is, and what it is not. But that very concept is an ongoing stumbling block to the very truth of what is the essence of a human being due to religious and ideological influences, where in the former it is the soul and the latter automotonization. Soul, being the centerpiece of major religious doctrines, constitutes our afterlife, which in turn suggests we have two substances, one material (which dies) and the other, the soul (which lives in eternity). Thus Gilbert Ryle’s familiar ‘Ghost in the Machine.’ It is also the familiar genesis of whether to mix the teachings of creationism and evolutionism in our schools, a very contentious issue that will not go quietly into the night.

Counterpoint to all this is collective wisdom from science that we are really nothing more than the sum of our genes, ideas from the seminal work of E. O. Wilson and his ‘sociobiology’ into contemporary thinking from Richard Dawkins.

A priceless—as well as enlightening and instructive—panel discussion on matters of truth would be with Daniel J. Boorstin, Richard Dawkins, Egon Guba and Yvonne Lincoln:

Boorstin: ‘I distrust single explanations of anything, including the meaning of truth. The thing that interests me most is the varied, unpredictable contrasts of human nature and of civilization’.

Richard Dawkins was interviewed May 2007, re his *God Delusion*. When asked if scientific truths are the only kinds of truths, he responded: ‘What other kinds are there?’[7].

In 1988, Guba and Lincoln published their familiar, *Naturalistic Inquiry*, wherein they discuss five different types of truth: *confirmable* (e.g., physics, chemistry), where the paradigm is scientific; *demonstrable* (e.g., math, philosophy, language, accounting), where the paradigm is logical; *ineluctable* (e.g., ethnography, history, counseling), where the paradigm is naturalistic; *recognizable* (e.g., judging music, wine, dance), where the paradigm is judgmental; *emergent* (e.g., law, commission, hearings), where the paradigm is adversarial [8].

Dawkins might well give Boorstin’s note a second thought, especially so when Dawkins admits that

moral truths are really beyond the realm of science, implying that Dawkins's ideological stance on science might not be as strong as some of his fiercest critics, such as Francis Collins, he of the Human Genome Project, maintain:

Now here is the paradox: apparently Dawkins is a subscriber to the Moral Law. Where might this rush of good feeling have come from? Surely this should arouse Dawkins's suspicion about the "blind pitiless indifference" that he argues is conferred on all of nature, including himself and all the rest of humankind, by godless evolution? What value should he then attach to altruism? [9].

Collins places the interaction between science and religion on issues of what and why we are this way: 'What we cannot discover through science alone, are the answers to the questions, "Why is there life anyway?" And "Why am I here?"'

Why not extend Francis's question a little: 'Why are we here at the Nuremberg trials? And all subsequent International Courts of Justice for crimes against humanity, especially crimes of genocide? Standard response is our sense of moral probity, our sense of virtue. And it is these characteristics that clearly make us unique within the universe of living organisms, summed up in what we know as conscience. For it is our conscience that enables us to separate the right from the wrong, the good from the evil in the context of human behaviour.

Conscience needs two operations to make such judgments, one being knowledge and understanding of the issues being evaluated and the other being the wherewithal to make decisions on what is being evaluated. In the realm of classic Aristotelian-Thomistic thinking the former refers to operations of the intellect and the latter free will.

Aquinas took these issues of intellect and free will and made them the bedrock of Catholic doctrine, reinforced throughout the centuries by the Dominicans and Jesuits as the makeup of the human soul. Theologically it is intellect and free will that go into eternity. Dawkins of course will have nothing to do with this because that is where science cannot go.

Be that as it may the fact remains—the truth is evident—we are the only species that asks the questions, 'Is this individual mentally fit to stand trial?' 'Does this individual know right from wrong?' These are conscience-laden questions. This is the world of moral thought, moral action. Whether these components are material-based or not is not germane to the issue. For example, Nobel Laureate Francis Crick has free will 'located in or near the anterior cingulate sulcus'[11]. So what if it is? Theologians and clerics will of course go berserk

because all matter has limited life span. Thus no eternity. But science and religion do have their moments of mutual understanding: H1N1 negated the shaking of hands and use of holy water in Catholic Churches, and the faithful can now receive Gluten-free hosts.

A caveat is necessary, one alluded to above regarding an individual's suitability 'to stand trial.' It is best expressed in the term *in potentia*. Not all humans are created equal. Indeed some of us come into the world with physical deformities and concomitant mental abnormalities that bear little resemblance to our common perception of newborns. But they are nonetheless humans. At the moment of conception we are all relatively equal but differences emerge as we progress biochemically. For some a normal healthy life for years to come. For others anything but. The *potential* exists at the very beginning, a potential that is very much affected by both internal and external environments.

To move from essence of being human to our *raison d'être* necessitates an examination of values, realities, movement, perfection, good and evil, and leadership. The shortest answer to the question, 'Why are we?' is that we exist to perfect the species. The primary medium through which to achieve that is through education. The primary means to achieve the proper education is through *real good* leadership.

### 3.2. Values

In the vernacular values are guideposts for human behaviour. A more enlightened interpretation is that values are concepts of the desirable with a motivating force [12]. This view of values has the following implications: First, because they are concepts, values are personal and subjective, which means there are 'no values out there.' This forces the realization that we must make a distinction between the concepts that give rise to our values and the objects of what is being valued.

Second, the nature of human concepts reveals three logically distinct types: transrational, rational, subrational. Transrational concepts are those rooted in beliefs, faith, principle, will. Rational concepts are of two broad types: logic-based and those that are consensus-based, peer pressure-based. Subrational concepts are those rooted in emotions, feelings, and affect.

Third, the notion of desirable refers to 'good.' When it is said that values are concepts of the desirable, the translation is that we value the good.

Fourth, the implication that values have a motivating force means just that: values are anything but inert. Their power and influence is second only to that of our genes and hormones.

The distinction between the 'how' we value and the 'what' we value is simply not mentioned let

alone discussed in popular leadership and motivational seminars from such notables as Stephen Covey and Peter Senge. Furthermore, one has to read diligently to tease out this distinction in relevant professional literature. The explanation for this lies most likely in acknowledging only in passing that human nature itself is a composite of three ontologically distinct principles of growth going back to Aristotelian thinking: will, reason, affect. We can believe; we can reason; we can feel (with the *in potentia* caveat).

The interaction between the 'how' we value and the 'what' we value can be illustrated in the following examples:

Water. We can value water as holy water (belief-based valuing). We can value water with very clear logic, as we now all know in washing hands to ward off H1N1; and it also quenches thirst (both instances of logic-based valuing). We can value water because others value it, especially at conferences (consensus-based valuing). We can value water because it tastes good (feeling-based valuing).

Education. We can value education as an inherent principle to benefit humankind (principle-based valuing). We can value education for the likelihood of financial gains (logic-based valuing). We can value education because others value it (consensus-based valuing). We can value education because, quite simply, we like learning (feeling-based valuing).

These two examples will, hopefully, give an indication of the difference between how we value and the object of our valuing system.

The lesson to keep in mind is that there are only four ways we can value anything. And all things, material and immaterial, can be valued throughout those four types of valuing. And in all instances of valuing, that which we value is perceived to be good.

In the context of values guiding our behaviour:

I do what I do because I believe in what I do.

I do what I do for the following ... pragmatic reasons.

I do what I do because others do it.

I do what I do because I like what I do.

Clearly in the realities of our everyday lives what we do is a combination of these types of valuing.

The linkage between good and values can be traced back in time to a conversation Socrates had with young Euthyphro on the court house steps, where Socrates says to Euthyphro, 'Now, here's a question for you. Is the holy loved by the gods because it is holy? Or is it holy because it is loved?' [13]. All we have to do is switch the question to. 'Is that which we value, good because we value it? Or do we value it because it is good?' and as noted above, the 'it' can be anything material or immaterial.

The implications for moral thought are profound: If we value moral behaviour because we perceive it to be good, then clearly there needs to be an examination of the meaning of good, as well as the meaning of morals. On the other hand, if morals are perceived to a good thing because we value them, then each of us are the final arbiters of justifying moral behaviour. Is the suicide bomber a murderer or martyr? The time has come for this fence-sitting moral philosophy to end.

### 3.3. Movement, perfection

Movement is usually a visual phenomenon but for some of us it can also be a visceral one whether it is rough seas or an upset stomach—and then all sorts of things move, often unpleasantly. But there is another aspect to movement going on all around us all the time, types of movement that are there for us to witness but perhaps seldom do: growth is common enough to witness be it in plants, trees or fetus. Also, we can change how things look, such as changing a tree into a totem pole. In all these instances of movement the being in question is 'moving, or being moved, from one state of existence to another state of existence.'

When the being is being moved, it is doing so to perfect itself [14]. This is basically what happens in all living organisms—maximizing what exists within them to become, unless the organism is handicapped by internal environmental forces such as diseases (e.g., cancer) and biochemical malfunctions (e.g., stroke).

### 3.4. Real good, apparent good, basic definitions

Real good is that which perfects, maximizes, enhances what any being has within its potential to be, for the betterment of that being and all other beings interacting with it. Apparent good is that which impedes, thwarts, negates real good. It is another term for evil.

Instances of internal material apparent good (or evil): Cancer cells and other diseases 'grow' or move to perfect themselves. In the process they destroy other cells necessary for healthy growth.

Instances of internal material real good: Cellular growth of diseases can be countered with cells from medication, where, in their ‘movement to perfect themselves’ by interacting with normal healthy bodily cells, they also enhance healthy states of existences in host organisms.

Instances of external material apparent good (or evil): One word suffices: pollution.

Instances of external material real good: clean air—and of course the now ever familiar hand wash greeting machines everywhere.

### 3.5. Real good, apparent good and the moral dimension

This is the centerpiece of how humanity goes about perfecting itself, our reason for being. All instances of human behaviour are movements to enhance and perfect what exists within, whether we realize it or not. In classic Thomistic language: ‘Now the essential meaning of good is that it provides a terminus for appetite, since, “the good is that which all desire.”’. Problems arise through ignorance of what we are all about. The ‘what are we’ and the ‘why are we’ are really not big-ticket items in the normal course of human affairs, until we approach either personal tragedy or our own immanent ends.

Moral codes deal with ‘ought issues’—what ought I to do—with three primary sources to guide us: religion, ideology and reason. The first two are really impediments to real good in the context of moral action because they interfere with reason, causing us to conclude, ‘I know because I believe,’ whereas reason enables us to conclude, ‘I believe because I know.’ Thus the necessity for an education philosophy that emphasizes ‘how to think’ instead of ‘what to think,’ so evident in madrasahs, for example.

### 3.6. Realities and real good, apparent good

Some insights into the nature of reality might be helpful in our understanding of real good and apparent good. Conventional wisdom from an eclectic perspective concludes that there are three fundamental types of reality: empirical reality, which we’re all familiar with as the stuff of sensations, where we can touch, smell, see, hear, taste. Then there is interpersonal reality, the stuff of communication between our selves and others. Finally there is the reality of ideas that exist in our heads [16]. But these are descriptive perspectives. Analytically, realities are facts and it is the nature of the ‘fact’ that causes humanity horrendous problems.

To give some idea of such problems, consider this from one of humanity’s deep-seated minds, C. G.

Jung as he attempts to explain the differences between science, psychology and religion, something he felt obliged to do because his supporters were accusing him of being too theological and metaphysical: ‘The difficulty for my critics seems to be that they are unable to accept a psychic reality. A psychic process is something that really exists, and a psychic content is as real as a plant or an animal’[17].

The problem with facts is not that they are but how we interpret them and use them. This of course spills directly into the interplay between facts and values, an unavoidable clash at times such that we do our best to force the facts to fit what we want them to be, a consequence of the value-spin we put on them.

Some examples to illustrate reality types, value typing and real good, apparent good: Concern about the medical and physical condition of our youth has led to fast-food/junk food dispensing machines being replaced with healthy foods (empirical reality, real good). Addictions of all kinds continue to plague humanity’s attempts to perfect itself (empirical reality, apparent good). Schools have introduced leadership programs designed to cause students to think and discuss school-related issues, as well as broad-based social issues (interpersonal reality, real good). Drug and gang-related activities are threats to mature development of youth (interpersonal reality, apparent good). Education that causes students how to think (reality of ideas, real good). Education that causes students what to think (reality of ideas, apparent good).

### 3.7. Leadership

The attempt here will be to bring a sense of closure, a gestalt from the above material because at the end of the day leadership is the final cause of good and evil and what has been discussed above are the prime ingredients of all leadership activities [18].

Marcus Aurelius [19] is a good starting point (wonder if he was a teacher?):

Begin the morning by saying to thyself, I shall meet with the busy-body, the ungrateful, arrogant, deceitful, envious, unsocial. All these things happen to them by reason of their ignorance of what is good and evil.’

How then does he get through the day? ‘What, then is that which is able to conduct a man? One thing, and only one—philosophy.’

Clearly sound advice from one who has been around the world of leadership. We also get similar sound advice in contemporary times from David Edmonds and John Eidinow in their analysis of one of history’s more biting exchanges between two

titans of philosophical thought: Ludwig Wittgenstein and Karl Popper: ‘Although only a few of us are philosophers lecturing at the podium, all of us are philosophers at the kitchen table’[20].

All leadership begins with ideas and is thus philosophy-in-action. The philosophical grounding, the anchors of ideas if you will, are embedded in values, what leaders value and how they value what they value. And because we are all value-laden creatures with the potential for exercising our values in varying degrees of intensity and commitment, we are all leaders with the potential to do good or evil.

The fulcrum around which the interplay between what we value as leaders and how we value is our conscience and its specific operative component, *intention*.

Intention is that specific human-only characteristic that determines what sorts of moral creatures we are. But intention acts only on the quality of information at its disposal, a blend of knowing the specifics of the situation involved and the power of the will attracted to various knowledge-based entities.

Leaders enlighten their consciences through three basic strategies, where the first two are ideological and religious indoctrination. The third is an authentic search for understanding some basic issues about humanity, such as why we are, what we are and ways to overcome the evils that beset humanity. Ideological indoctrination is simply the worst possible scenario to inculcate notions of real good and not far behind would be religious indoctrination. But the third option, the search for an authentic understanding of what and why we are, has the best chance for inculcating notions of real good, especially in a leadership context.

This search for authentic understanding is captured quite realistically with the thinking of the Brazilian philosopher of education, Paulo Freire, who has nothing good to say about an education process that views the mind as an empty vessel into which teachers pour knowledge, as in madrasahs. Rather, he sees authentic education as a mix of all mental capacities, such as intellect and emotions, wherein students not only develop an eclectic understanding of events but most important of all, the ability to continue questioning what has been assumed to be accepted truths, clearly in line with Boorstin but not Dawkins.

Issues of ‘what ought I to do’ are habitually resolved by attempts to answer the question, ‘What is the right thing to do?’ And it is here that all sorts of terrible consequences unfold because rights, by their very nature, are matters of law—moral, organizational, cultural—as well as rules, regulations, policies and procedures. In an organizational context members are not penalized for doing what is right, following orders, rules, regulations; there are no negative career consequences. But when a member tries to ‘do

good’, well, career jeopardy is close at hand. Ask Dr. Jeffrey Wigand, (Tobacco/Movie Insider), Nancy Oliveri, (Sick Kids, Toronto).

Yet individuals are forever in a mindset that the moral law is totally and wholly about doing right; doing good rarely surfaces. A reasonably strong explanation for this is that our personality, more often than not, prefers parsimony, an easy solution, minimum thinking and so we acquiesce, submit to rules, regulations and of course law. To give some indication of the ‘Rights’ issue, Rhona Smith and Christien Anker put together a text, *The Essential of Human Rights*, with input from 127 authors, of whom 63 have legal backgrounds; it is an ‘everything you wanted to know’ about human rights. As of 1 January 2003, ‘20,556, 281 people fell within the mandate of the United Nations High Commission for refugees’ [21]. But one has to search further for instances of philosophy replacing numbers as can be found in Jerome Shestack’s thoughtful analysis of human rights: ‘one’s attitudes toward the subject of international human rights law are likely to remain obscure unless one understands the philosophies that shape them’[22].

What is incumbent upon leaders—which means all of us—but especially those in critical influential positions such as educators, politicians, business and religious people, is that they attempt some kind of integration of notions of real good with that of human rights. It might help if it is realized that real good is the perpetual end of humanity’s existence, the perfection of our species. And that rights are the means to that end. As matters now stand, we have established, elevated rights as our end. We place very high value on human rights and correctly so but we do not analyze critically just why we do so. We somehow conclude that there is no need to go any further in the conceptual development of human rights issues. We somehow conclude that human rights are necessary because we are human; by our very nature human rights are necessary because we are human...(we’re really not getting anywhere here).

Richard Dawkins has little time for notions of causality regarding what we are and why we are. (As an aside he simply dismisses Aquinas’s ‘5 proofs’ for the existence of God, a theological issue beyond the parameters of this paper). But the alternative to dismissing the reality of causality, in both empirical and conceptual dimensions, is to embrace randomness (Dawkins’s choice) or worse, chaos.

But if we take a moment to examine human rights as an effect, which it is in the context of causality, then obviously we ought to examine its cause. That is, what causes human rights to be. There is a certain degree of seductiveness to say that human rights are caused by our attempts to perfect what exists within us to become. And from that perspective human



rights becomes a means not an end. But there is simply no discussion in relevant literature on this, including Shestack's work.

Recent history provides the clearest illustration of the necessity to examine the relationship between human rights and humanity's destined end. Stanley Milgram did this in his electro shock research, recorded in *Obedience to Authority*, leading him to frame the notorious *agentic state*, a mindless type of commitment but one that was the backbone of the Nazi culture [23].

One of the more infamous events of WWII that surely needs philosophical examination but not readily available was the Wannsee Conference, convened 20 January, 1942, a one-agenda meeting, 'The Final Solution.' Fifteen high-ranking Nazi officials were present; seven of whom are identified as 'Dr.', e.g., Dr. Alfred Meyer, Dr. Gerhard Klopfer. Approximately 11 million Jews were identified in 30 countries to be exterminated. One of the more chilling notes: 'The objective was to purge Germany's living space of Jews in a legal fashion' [24].

Two items for thought from the Wannsee Conference: First, at least seven of those discussing 'the final solution' were well schooled formally but poorly educated. Second, the concern of 'legalizing' extermination speaks directly to the issues of 'rights as a means to an end (superior Aryan race)', a movement to a perceived good but totally evil, or apparent good as used here in this paper.

Another 3-member panel discussion is appropriate here, this one dealing with thoughts on education from three of humanity's more enlightened members, John Locke, Immanuel Kant, Albert Einstein.

John Locke: I think I may say, that of all the men we meet with, nine parts of ten are what they are, good or evil, useful or not, by their education. 'Tis what makes the great difference in mankind [25].

Immanuel Kant: The universal end of mankind is the highest moral perfection. If we all so ordered our conduct that it should be in harmony with the universal end of mankind, the highest perfection would be attained. How far has the human race progressed on the road to perfection? If we look at the most enlightened portion of the world, we see the various States armed to the teeth ... How then is perfection to be sought? Wherein lies our hope? In education, and in nothing else [26].

Albert Einstein: And certainly we should take care not to make the

intellect our god; it has, of course, powerful muscles, but no personality. It cannot lead, it can only serve; and it is not fastidious in its choice of leader. This characteristic is reflected in the qualities of its priests, the intellectuals. The intellect has a sharp eye for methods and tools, but is blind to ends and values [27].

There is much food for thought concerning education, especially the need for leadership in education, from these vignettes, from the moral imperative to perfect our species, to be wary of intellectual prowess in the face what it is we value and how we value, to being authentic about concerns for our ultimate destiny—the perfection of the species—to the realization that in the end it is education that determines good and evil. Yet this preferred end continues to be threatened by 'States armed to the teeth' as Kant so eloquently put it to his classes in the years 1775-1781. Prognosis? Well, in 2008, the world spent 1.5 trillion dollars (US) on arms, the US percentage being 48%, with Europe following at 20%.

What then, is good leadership? Good leadership is that which recognizes and understands that all human beings are ends unto themselves. Good leaders treat others with respect and dignity because they are human. These are clinches, motherhood issues much easier said than done. The danger though is that such obviously preferred characteristics are rooted in religions and ideologies and not in reason, as they ought to be.

By far the single greatest characteristic of good leadership is authenticity. Authentic leaders do not 'play games' with the lives of others, using them as cannon fodder for their own career advancements. Authentic leaders balance well the needs and priorities of the organization with the needs of organization members. Authentic leaders do not function by power of will or power of roles occupied because other members know these realities. Authentic leaders are kind and caring in a genuine sense of looking after the lives of others. Authentic leaders have no need for sarcasm, the cheapest form of wit.

Most significant of all, authentic leaders not only recognize the talents, skills and intellectual maturity of others, they will do what they can to enable these individuals to advance their own careers, even if it means the likelihood of being surpassed themselves. This is a rare leadership trait in all walks of life, from home to workplace, where parents and superiors are too often inclined to thwart and impede the progress of their children and subordinates. This characteristic of authentic leadership is embedded in the moral dimension of leadership, where the moral component stems from reason and not from religions

and ideologies. This particular aspect of authentic leadership speaks to the ‘what’ and ‘how’ of the leader’s valuing: The ‘what’ is the betterment of others, to maximize what exists within them to be, for the benefit of all. The ‘how’ is the valuing process rooted in matters of principle, where that principle is a belief system that the betterment of humankind is why we are.

### 3.8. Summary

High schools are increasing their use of leadership programs and in some cases such programs are becoming mandatory. Students look forward to these programs because they see them as tools for coping in their world beyond the classroom. They do see imbalances between the haves and the have-nots as being unfair in an overall humanitarian sense; they do not see this as being a good thing for their futures; they see their role models as instances of conflict between what they say and what they actually do in the context of the decisions they make. They see education as the only effective medium for a better world, a safer world.

The call from students for authentic leadership in broad-based social issues challenges their teachers to generate strategies to equip their students with skills necessary to develop such leadership. Teachers recognize, right up front, that they really do not have the conceptual groundings to develop such strategies. They do not know where to go, what to read, whom to listen to. The materials that do exist are simply not all that helpful.

When teachers are either forced by students or forced within themselves to grapple with notions of good and evil, especially in a leadership context, they readily acknowledge they are on their own. There is simply no meaningful and intelligent material to help explain suicide bombers, greed in the context of the 2008 financial meltdown or ponzi schemes. Similarly for all the instances besetting humanity in the preamble of this paper.

This paper put forth some ideas that can be considered basic foundational conceptual tools to hopefully aid teachers. It is pointless to discuss leadership in the absence of meaningful dialogue on two critical issues, what we are and why we are. If these issues are simply glossed over or parceled off to religions and ideologies then leadership exercises in high schools may well be more harmful than beneficial.

Any meaningful answer to the question, ‘What is good leadership?’ necessitates an analysis of what good means and what leadership means. The approach taken here is that the good is what all living organisms value. That evil makes sense only when conceptually separated out from real good, where real good is that which perfects what any being has within its potential to become, for the

betterment of that being and all beings interacting with it. Evil is another term for apparent good, where apparent good is that which negates real good.

In human context, all humans have, *in potentia*, the wherewithal to do real good and apparent good. It is our conscience that enables us to distinguish one for the other. Two interrelated mechanisms that make our conscience work, for good or evil, are intellect and will, where the former is the storehouse of knowledge, the repository of what we value and how we value. The will is the mechanism that makes the decisions for good or evil.

Leadership is philosophy-in-action. We are all leaders. And in all leadership exercises we ourselves are the first ones to be led. Some of us are involved in highly complex and responsible positions that either enables humanity to progress along its destined path—the perfection of the species—or advance one step forward and two steps back. Many educational institutions are rooted in a philosophy of education that might well end up annihilating humanity; equally so are those schools that will have us as automatons. Both case scenarios are evil in that they negate real good.

The case for good leadership rests entirely on what it is we value, how we value what we value, how we view our reason for being, how we view what we are. In all instances we must deal with the reality of facts, facts that are ideas in our heads, facts that exist in how we interact with others and the facts of sensation, all of which we evaluate through our own individual, personal and subjective value lens.

### 3.9. Further research

Virtually everything noted herein is speculative. There is no research concerning real good versus apparent good nor is there any research concerning the ‘how’ we value versus the ‘what’ we value. There exists very limited empirical research on Hodgkinson’s value paradigm. But even here the clear distinction between the ‘how’ and the ‘what’ is at best vague [28].

Research strategies for issues of good would most likely have to be qualitative in the broad genre advocated by Denzin and Lincoln [29], John W. Creswell [30], *inter alia*. The thoughts from Werner Heisenberg are certainly relevant: ‘When we speak about our investigations, about the phenomena we are going to study, we need a language, we need words, and the words are the verbal expression of concepts’ [31]. The implication is that researchers must first develop a coherent body of thought about real good versus apparent good before any thought can be given to attempting empirical research. The main challenge will be to separate out the conventional wisdom of subjective reality that

‘everyone knows what good is’ to a more objective type reality.

It is difficult to comprehend the absence of empirical research on Hodgkinson’s value paradigm. Personal communication with him as recent as January 2010 reveals a full body of speculative literature spanning some thirty years with a relatively equal balance of positivist and humanist perspectives but nothing empirical. A possible explanation is the complex philosophical rigidity of the three ontologically distinct valuing systems, i.e., the transrational, rational and subrational. Substantiation for this comes from personal experience in the mid-1980’s with certain universities in Ontario: They simply found him too difficult to handle. Be that as it may there is a definite PhD awaiting here for an adventuresome candidate.

There is a growing groundswell of research on authentic leadership that could easily handle the integration of values as presented here, i.e., the ‘how’ versus the ‘what’. Once there is some broad consensus on the interpretations of real good versus apparent good, then this would clearly lead to a comprehensive interpretation of authentic leadership.

#### 4. Poets say it best

There is really only one way to put all this material in perspective, indeed all the thinking that has preceded us all these thousands of years: it is to the poet we must turn. From John Boyle O’Reilly (1844-1890):

What is good

‘What is the real good?’  
I ask in musing mood.  
Order, said the law court;  
Knowledge, said the school;  
Truth, said the wise man;  
Pleasure, said the fool;  
Love, said the maiden;  
Beauty, said the page;  
Freedom, said the dreamer;  
Home, said the sage;  
Fame, said the soldier;  
Equity, the seer;--  
Spake my heart sadly,  
‘The answer is not here.’  
Then within my bosom  
Softly this I heard:  
‘Each heart holds the secret;  
Kindness is the word.’

#### 5. Workshop Mechanics

Here we look at one instance of how various components of high school leadership exercises

might be played out. Topics are chosen by students. In this case, Christmas school pageant. Critical issues raised include, can we put on a traditional Christmas Pageant with usual carols and Nativity, and perhaps some students dress up and play central characters? Yet we all know some parents really balk at this, seeing it as a threat to their own religions, like a conversion thing for their children. And that gets the principal upset—and some teachers—because they have to deal with all sorts of key education players from Board members to irate parents. (High school students know these things). So what did we do last year? We had an assembly and we all sang songs with only the slightest hint of Christmas. Like Jingle Bells.

Teacher’s plan: See if students can grasp nuances of interpersonal and intrapersonal value conflict. Teacher suggests that a look at what we value and how we value might help explain tensions generated: Poster of a muscle car held up, with four pistons exposed. Each represents a specific driving force at any given time. The four pistons are labeled beliefs, logic, consensus, and feelings. These four ‘value pistons’ drive the human engine. Destination: Christmas Pageant (picture shown), instance of empirical reality; REAL destination: protecting religious beliefs, instance of ideational reality; pictures identifying different religions shown,

Value conflict resolution. Two sides: Christian, other, both adhering to basic beliefs. Can belief-based valuing be tempered? Can reason (logic) help resolve highly charged beliefs? What roles are our emotions playing in the conflict? Where do our values come from? Can we get along without them? Why can’t they see our point of view? Can we really sense the difference between how we value and what we value?

Some class students are caught between going along with others who want traditional Christmas pageant and, on the other hand, thinking that a joint multi-religious gathering is better, saying that the true spirit of Christmas is universal. Which approach is better? How to resolve value-conflict within the self: go along with the majority? Go it alone? What psychological costs are associated with options?

Some students ask about regulations and policy: Are there policies in place to guide us? Another student suggests we consider the right thing to. Which is? asks another?

At this point teacher delves into the murky waters of right versus good: Where do rights come from? Who establishes what is the right thing to do? Should we consider whether rights trump goods? What is good? What about the moral dimension? Is there such a component here? Reference material to such questions is most often a combination of traditional religious and ideological thinking laced with popular leadership seminars and whatever university courses have to offer. The hardest thing

about all this is for teacher to feel comfortable with using reason as the anchor for moral thinking, and keeping religions and ideologies at bay.

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# A Study on Classroom Management Profiles of Preschool Teachers

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## Abstract

*Classroom management is a system which helps children learn auto-control appropriately and display appropriate behaviors. As children gain more independence, they learn to help others and overcome obstacles. Therefore, the attitudes of teachers and the methods and techniques they employ in the classroom are effective on the development of children. This study is carried out investigate classroom management of teachers, who have major effects on preschool children. The sample of the study is composed of 267 female and 15 male preschool teachers – a total of 282 teachers, working in 81 provinces of Turkey.. The data collection tools were the inquiry form and the Classroom Management Profile Scale, to identify classroom management profile of teachers The scale is a five-level likert-type scale, comprising four subcategories, i.e. authoritarian, authoritative, laissez-faire and indifferent, and a total of 12 questions. For whichever predefined profile a teacher received the highest score, she or he is supposed to have that given profile. In the statistical analysis of the data, t-test was used for the comparison between genders, ANOVA for multiple comparisons and Pearson correlation to find out any correlation among profiles.*

## 1. Introduction

Teachers, undertaking a critical role in learning activities, conduct various activities with students, guide students and help them acquire desired behaviors, make them adopt the system of values which constitutes the social culture and finally prepare students to life and further education [1]. In its most general sense, education is the upbringing of individuals according to specified objectives. The individuals who undergo an educational process have a differentiated personality. This differentiation result from the knowledge, skills, attitudes and values acquired in the education process. Today, schools are the most important component of the educational process. In a formal education setting, children learn everything correctly in a planned and programmed manner. In such a setting, children are raised in line with the main objective education, i.e. “to make individuals beneficial for the society” [2]. Teachers need to develop a management system in order to

function in a setting which is marked by varying personality traits. Classroom management is a system which helps children learn auto-control appropriately and display appropriate behaviors. As children gain more independence, they learn to help others and overcome obstacles. Therefore, the attitudes of teachers and the methods and techniques they employ in the classroom are effective on the development of children. Teachers are required to fulfill the roles of both educator and administrator simultaneously and harmoniously. An effective classroom management is important for teachers to carry out the role of an educator successfully. The primary duty of teachers to achieve classroom management is to establish an appropriate classroom order [3]. Classroom management can be defined as the establishment and maintenance of a setting and order which is favorable for learning, by creating an effective coordination among instructional plan and programs, teaching methods, instructional activities, technology, time, place, teachers and learners.

Students that receive education in a preschool institution in the early years of life, when learning potential is at the highest level, are more likely to have higher education and to achieve better academic success compared to the ones that do not go to a preschool [4,5]. Thus, the quality of the environment and the education provided for children in early ages have major effects on their future success and life quality. The attitudes of teachers and the methods and techniques they use in the classroom are effective on the development of children. Provided that teachers employ children-oriented educational and instructional methods correctly and consciously in the classroom, they support development, learning, maturation and good behaviors of children, meeting their basic preschool education requirements [6]. Teachers guide the learning process. Classroom management is related with positive teacher-student relationships and the existence of conditions that support classroom environment [7]. That is why, the fact that teachers are aware of their own profile affects not only the classroom environment but also the learning process. This study is carried out investigate classroom management of teachers, who have major effects on preschool children.

## 2. Method

The sample of the study is composed of 267 female and 15 male preschool teachers – a total of 282 teachers, working in 81 provinces of Turkey. The data of this study were collected from preschool teachers who attended in-service training programs of the Ministry of National Education in June – August 2009. The data collection tools were the inquiry form, designed by the researchers, and the Classroom Management Profile Scale, developed by Bosworth to identify classroom management profile of teachers [8]. The scale was adapted to Turkish culture by Akman and Umay [9]. The scale developed by Bosworth is a five-level likert-type scale, comprising four subcategories, i.e. authoritarian, authoritative, laissez-faire and indifferent, and a total of 12 questions. For whichever predefined profile a teacher received the highest score, she or he is supposed to have that given profile. Adapting the scale into Turkish, Akman and Umay conducted Principal Components Factor Analysis on the scale and found out that the scale – which originally has four subcategories – ended up with five dimensions. The researchers examined the items in five dimensions and renamed the profiles, taking opinions of experts, as “concerned (questions #3,4,8)”, “democratic (questions #1,2,6)”, “rigid/authoritarian (questions #5,9)”, “tolerant (questions #10,12)” and “exhausted (questions #7,11)”. The Cronbach Alpha Reliability Coefficient of the scale is 0.408. Although this coefficient seems low, given that the scale is composed of five sub-scales and that the number of items in each sub-scale is low, the coefficient is acceptable as the lower limit.

## 3. Findings

In the statistical analysis of the data, t-test was used for the comparison between genders, ANOVA for multiple comparisons and Pearson correlation to find out any correlation among profiles.

**Table 1. The descriptive analysis results of classroom management profiles of the teachers in the sample (N=282)**

Type of Profile	Min	Max	Mean	Std. Dev.
Concern	4	15	11,51	2,320
Democratic	3	15	8,99	1,972
Rigid authoritarian	2	10	4,68	1,783
Tolerant	3	10	8,35	1,429
Exhausted	2	10	5,32	1,278

The Table 1 provides the distribution of minimum, maximum and average scores that preschool teachers received from each sub-profile in the classroom management scale. The table demonstrates that the

highest scores concentrate on the “concerned” and “democratic” profiles. The “authoritarian”, “tolerant” and “exhausted” profiles, which in the order given here follow the first two, received lower scores.

**Table 2. The distribution of classroom management profiles of the teachers in the sample by gender**

Type of profile	G	N	X	S.D.	S.E	t	p
Concern	F	267	11,51	2,319	,142	0.075	0.703
	M	15	11,47	2,416	,624		
Democratic	F	267	8,97	1,993	,122	-0.559	0.433
	M	15	9,27	1,580	,408		
Rigid authoritarian	F	267	4,70	1,813	,111	0.767	0.17
	M	15	4,33	1,113	,287		
Tolerant	F	267	8,31	1,432	,088	-1.636	0.676
	M	15	8,93	1,280	,330		
Exhausted	F	267	5,31	1,286	,079	-0.251	0.634
	M	15	5,40	1,183	,306		

The Table 2 illustrates the gender-based comparison of classroom management profiles of the teachers in the sample. According to the table, in all subtests of the classroom management profile scale, the difference between the average scores of two genders is not significant according to the significance test ( $p>0.05$ ).

**Table 3. The ANOVA results of classroom management profiles of the teachers in the sample by year of experience**

Type of profile		Sum of Squares	df	Mean Square	F	p
Concern	B Groups	12,106	6	2,018	3,370	,898
	W Groups	1500,362	275	5,456		
	Total	1512,468	281			
Democratic	B Groups	61,940	6	10,323	2,754	,013
	W Groups	1031,028	275	3,749		
	Total	1092,968	281			
Rigid authoritarian	B Groups	34,439	6	5,740	1,837	,092
	W Groups	859,195	275	3,124		
	Total	893,635	281			
Tolerant	B Groups	8,691	6	1,448	,705	,646
	W Groups	565,252	275	2,055		
	Total	573,943	281			
Exhausted	B Groups	5,810	6	,968	,587	,740
	W Groups	453,467	275	1,649		
	Total	459,277	281			

The Table 3 provides the one-way analysis of variance (ANOVA) results of the correlations between year of experience and profiles of the teachers in the sample. The table demonstrates that there is not a significant correlation between the teachers’ classroom management profiles and their years of experience.

**Table 4. The correlation among classroom management profiles (N=282)**

Type of profile	R/p	Conc.	Democ	Rigid Auth.	Tolerant	Exhaus
Conc.	r	1	,215(**)	-,037	,235(**)	,126(*)
	p	.	,000	,531	,000	,034
Democ.	r	,215(**)	1	,085	,299(**)	,106
	p	,000	.	,154	,000	,076
Rigid Auth.	r	-,037	,085	1	,044	,173(**)
	p	,531	,154	.	,460	,004
Tolerant	r	,235(**)	,299(**)	,044	1	,241(**)
	p	,000	,000	,460	.	,000
Exhaus	r	,126(*)	,106	,173(**)	,241(**)	1
	p	,034	,076	,004	,000	.

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

The Table 4 shows Pearson correlation analysis results which reveal the correlation among subtests of the Classroom Management Profile Scale. According to the table, the “concerned” profile is correlated with the democratic and tolerant and exhausted profiles, the democratic profile with the concern and tolerant profile, and the authoritarian profile with the exhausted profile. This finding suggests the possibility that the authoritarian, tolerant and concerned profiles in classroom management may experience exhaustion.

#### 4. Discussion

This study is carried out investigate classroom management of teachers, who have major effects on preschool children.

The findings of this study reveal that oppressive discipline is not used any more today and that the majority of the teachers prefer the democratic and the concerned profile in their classroom and do not favor very much authoritarian, tolerant and exhausted profile. This finding is gladsome given the effects of teachers on students’ development. In democratic approach, teacher is a component of the classroom, helping children gain experience and encouraging them to think on these experiences so that they can learn. Thus, children learn to consider both their own and others’ benefits [10]. Akman et al. carried out a study to investigate the classroom management profile of preschool teachers and found out that, in the sample, 36.4% of the teachers preferred democratic management, 39.2% preferred free management and 24.4% preferred both democratic and free management [11]. Children trained in view of democratic approach, have higher self-respect, are furnished with social skills, and are competent and self-disciplined [10,18,19]. The researches demonstrate that children who are provided with the opportunity to select and self-guide in preschool age make more rational choices in adolescence [20].

One of the important findings of this study is that there is not a significant correlation between gender

and classroom management profiles of teachers. However, given average scores (see Table 2), it can be said that male teachers are more concerned, democratic and tolerant and less rigid in classroom management, and in other words, that they are more comfortable compared to female teachers. This finding is of particular importance given the prejudgment that male teachers are less tolerant, and that they adopt more rigid and authoritarian attitudes in preschool education institutions [12]. Teaching at preschools is still considered a female job, although males have started to show greater interest in it in recent years.

Another finding of this study is that teachers’ year of experience does not affect their classroom management profile (see Table 3). This finding brings into mind the possibility that new teachers, who are normally expected to be inexperienced in classroom management, graduate as equipped with management skills. In Turkey, the teacher training system has been restructured and improved two times in the last decade [13]. The recent restructuring integrated into the curricula the courses which aim better training of teachers in classroom management. Accordingly, research results demonstrate that teachers who receive training and support in classroom management have higher self-confidence. Hoffman Hutchinson &Reiss studied the impact of “Conscious Discipline” program, which provides training about emotional intelligence and classroom management, on teachers of early childhood. [14]. The researchers found a significant development in posttest results about the teachers’ perceptions on school climate, the new techniques used in classroom management and the application of these techniques.

Phelp suggests that one of the most important difficulties that new teachers encounter is classroom management [15]. If teachers fail in classroom management, they are likely to fail in their instructional efforts. A teacher, who is competent in many aspects of the profession, may have to leave the job just because she or he is not good at classroom management. Laut surveyed 43 preschool teachers, 44 nursery school teachers and 87 primary school teachers to compare classroom management-related problems of primary school teachers and preschool teachers. The data were collected by using instructional, disciplinary, and personal dimensions of classroom management [16]. The hypothesis that experienced teachers adopt a more interventionist management approach was disproved on the basis of classroom management styles scale; and a low correlation was found between experience and interventionist management approach. It is also one of the findings that inexperienced teachers have considerably less interventionist approach. Furthermore, teachers with middle level of teaching experience adopt more interventionist classroom management approach compared to experienced teachers. Turla et al. studied the problems related with physical environment, curriculum, method, technique, classroom and behavior management according to

specific variables, and discovered that teachers are more willing to employ new methods and techniques as their level of education increases but that they are in conflict with the administration of the institution about the use of these methods in Turkey. Furthermore, they investigated the problems about classroom and behavior management in view of the variables of the school they graduated from and their year of experience in teaching profession, but did not find a significant difference between the groups. The teachers stated that they occasionally had to shout at children to control them, to punish them in order to eliminate undesired behaviors and to give awards in advance to orientate children to positive behaviors [17].

## 5. Conclusion

The findings of this study reveal that the majority of the teachers prefer the democratic and the concerned profile in their classroom and do not favor very much authoritarian, tolerant and exhausted profile. One of the important findings of this study is that there is not a significant correlation between gender and classroom management profiles of teachers. Another finding of this study is that teachers' year of experience does not affect their classroom management profile

The following suggestions can be made on the basis of this study: Teachers should be provided with training and support about classroom management through both pre-service and in-service trainings. Furthermore, administrative (institutional) support and guidance should be available. In preschool teaching, gender discrimination among teachers should be avoided and measures should be taken to employ teachers from both gender. Thus, the classroom management profiles of teachers from different genders may promote and strengthen the field of preschool teaching.

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# Teachers' Experiences of their Teaching and Learning Environments and its Effect on their Work Performance

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## Abstract

*This is an exploratory survey of how teachers experience their teaching and learning environments, and the effects such experiences have on their work performance. The research was conducted in selected secondary schools in and around Bloemfontein in the Free State Province of South Africa. A questionnaire comprising both closed and open-ended questions was used to gather information from the respondents. A qualitative data analysis of the results indicated that teachers have had both positive and negative experiences in different contexts and at different stages of their teaching career. This paper focuses on the negative experiences in teaching. The negative experiences identified included lack of learner interest in their school work; unsafe school environments; lack of support for teachers; lack of resources; and unprofessional conduct of some teachers. Effects of these experiences on teachers as individuals and on their work performance have been identified. Based on these findings, some recommendations have been made.*

## 1. Introduction

Many problems in the South African education system and the school sector, in particular, could still be traced to the apartheid era. The legacy of apartheid has left South Africa with an education system that is characterised by fragmentation, inequity in provision, a questionable legitimacy, the lack of a culture of teaching and learning in many schools, and a resistance to changing the way things have been done in the past [6]. The introduction of new curricula, the shift to school-based management, the abolition of corporal punishment and the recognition of learner rights, for example, have created challenges for the educators as well as the

school principals. Quick adjustments had to be made by all concerned to meet the challenges and demands of change. All changes in the school sector finally come to bear on teachers who are implementers of change

Both beginner and experienced teachers are affected by different teaching contexts and, consequently, need support and constant monitoring, especially during a period of transition and change. The varying intensity and severity of teacher experiences could lead to different reactions which ultimately hinder teaching and learning, and affect the teachers psychologically and emotionally.

It is against this background that the researchers decided to undertake this study to explore teachers' experiences of their teaching and learning environments, as well as the effects these might have on their work performance, in selected schools in and around Bloemfontein.

## 2. Theoretical framework

The theoretical framework for this study derives from Mentz's idea of the relationship between the *quality of working life and experience*. The quality of working life relates to the quality of the experience the worker has in the organisation and which is expressed in how he/she experiences, among other things, the climate in the organisation [10]. In the school the teacher experiences his/her environment as positive or negative depending on a number of factors such as the climate within the school. Quality of working life relates to those factors within an organisation that guarantee that a worker will experience a high level of satisfaction. Among these factors are security, a safe and healthy working environment, recognition of achievements, a participative organisational structure and open communication channels. The quality of working life is determined by how an organisation manages to fulfil certain minimum conditions necessary for a

pleasant working environment. The individual is only able to perform well when a satisfactory quality of working life exists.

### 3. Teaching contexts

Teaching is a social act which is defined by its socio-cultural, biographical, historical and structural contexts [12]. These multiple contexts pose certain demands on teachers' lives as well as their work performance.

Every teaching situation is a unique and complex interplay of interacting, interdependent and often incompatible contexts. Teaching occurs within a structural context which is the education system's established roles and relationships, including operating procedures, shared beliefs and norms [3]. Decisions made at all levels throughout the education system will eventually impact on classroom practice. Elements of structural context include national curriculum decisions about educational funding and curriculum directions; the policies and expectations of the particular school system (government or independent) and even the impact of the geographic location [12]. Getzels and Guba refer to the institution, roles, and expectations as structural elements of a school as a social system [15].

The socio-cultural context represents the environment beyond the education system, such as the "demographic, social, political and economic conditions, traditions and ideologies, and events" [3]. Interactions within the socio-cultural context between teachers and learners, parents and professional peers, occur through the interactive classroom social structure, as well as through the organisational structure of the school and the system. It also occurs through the embracing cultural context representing the social structure and hegemony (*control*) that links the perspectives of individual teachers and groups of teachers to the immediate local community of the school, its surrounding society's ideologies, practices and material conditions [12].

The biographical context represents each individual's personhood formed in social circumstances that include: their experiences; their interactions with other individuals; groups; institutions; and environments both physical and human, natural and created [5]. Each social interaction therefore is a function of the biographical context of the teacher and those with whom s/he interacts.

Teaching also takes place within a specific temporal period, and hence, the historical context acknowledges that "past events and experiences are potential context for subsequent ones" [4].

The four contexts of teaching that are referred to, are not discrete but they are "overlapping and interacting clusters" [4] that vary over time depending on the local situation and the severity of the interaction. Thus every interaction a teacher has with a child, parent or colleague represents a unique context of situation, which is an outcome of the balance of the elements of the structural, sociocultural, biographical and historical contexts of the participants [12]. A teacher is therefore shaped by all these four interacting and interdependent contexts.

### 4. Teaching, context and cultural transmission

Individuals actively interact with their environment and in turn influence its features and its changes in time. The quality of experience they associate with daily activities, and the resources they invest in work and leisure, more or less directly affect the features and wellbeing of the community to which they belong. Similarly, teachers have traditionally played prominent roles in their cultural context, selecting, reproducing and transmitting aspects of cultural heritage [9]. Furthermore, they influence the hierarchy of values and the cultural integration of their pupils [14]. This implies that the quality of experience teachers get at work plays a central role in the educational process. It influences the effectiveness of cultural transmission and the students' desire for learning [9].

Cultural integration is a very important aspect of teaching in a multicultural context in the South African education system. Chapter 2 of the Constitution of the Republic of South Africa contains the Bill of Rights in which the state guarantees the protection of individuals' fundamental rights [13]. Two provisions of the Bill of Rights that are relevant to our discussion are: equality and unfair discrimination, and cultural rights. These rights have to be observed at all levels of the education hierarchy, including the school as well as the classroom level. Teachers and learners come from different racial and cultural contexts and all these contexts come together in a classroom environment through interactions between teachers and learners, as

well as between the learners. Teachers have to embrace the different cultures that exist in their class.

## 5. Aim of the study

The aim of the study was to investigate teachers' experiences of their teaching and learning environments and its effect on work performance. Based on the stated aim, the following research questions were formulated:

- What are teacher experiences of their teaching and learning environments?
- What are the effects of such experiences on their work performance?

## 6. Research methodology

The study followed both a literature study and an empirical investigation. The literature study provided a picture of the different teaching and learning environments to which educators are subjected and their reactions to such environments. A literature study is intended to support statements and points of view with research evidence, as empirical justification requires reference to other research [11]. The literature consulted in this study provided a theoretical framework against which the findings were interpreted and discussed.

This is an exploratory survey of how teachers perceive the experiences of their teaching and learning environments as well as the effects such experiences have on their work performance. The population for the study consisted of teachers in secondary schools in and around Bloemfontein in the Free State Province of South Africa. The sampling technique used was convenience sampling. Convenience sampling involves choosing the nearest individuals to serve as respondents [2]. Convenience sampling was used to select ten secondary schools which were accessible to the researchers. These are some of the schools that are used by the Central University of Technology, Free State, for placing students for Teaching Practice. The researchers were also placed in these schools to evaluate students during teaching practice. In each school ten teachers were selected, again using convenience sampling.

A questionnaire comprising both closed and open-ended questions was used as an instrument to gather information from the teachers in the selected schools. From a total of one hundred questionnaires, sixty were returned. Both quantitative and qualitative methods of data analysis were used in the study.

Qualitative data were divided into themes and categories that began to emerge.

## 7. Analysis of Findings

The next section presents the biographical data of the respondents.

### 7.1 . Biographical data

The Table 1 provides information on the gender of the respondents.

**Table 1. Gender of respondents (N=60)**

Category	Frequency	Percentage (%)
Female	29	48.3%
Male	31	51.7%
Total	60	100%

51.7% of the respondents were male teachers, while 48.3% were females.

**Table 2. Position of the teacher at the relevant school (N = 60)**

Category	Frequency	Percentage (%)
Educator	54	90.0%
Heads of Department	5	8.3%
Deputy Principal	1	1.7%
Total	60	100%

The Table 2 shows that 90% of the respondents in the study were educators.

**Table 3. Experience of respondents (N=60)**

Category	Frequency	Percentage (%)
Less than a year	3	5.0%
1-5 years	35	58.3%
6-10 years	6	10.0%
11-15 years	4	6.7 %
16-20 years	8	13.3 %
Above 20 years	4	6.7 %
Total	60	100 %

The teaching experience of respondents, ranged from less than a year to above 20 years, with the majority (58.3%) falling in the category of 1-5 years.

**Table 4. Location of the school (N= 60)**

Category	Frequency	Percentage (%)
A Town	8	13.3 %
A Township	52	86.7 %
Total	60	100 %

The majority (86.7%) of respondents taught in schools that were located in the townships.

## 7.2. Negative experiences

Here we look into those experiences which appeared to affect teaching and learning adversely.

### 7.2.1. Interaction with learners

Lack of interest in school work that was identified was evidenced by the non-attendance of classes, lack of participation in class and constant neglect of work, especially the homework. Teachers blamed the abolition of corporal punishment for this situation. Long distances the learners have to walk to school everyday also create problems.

*“Some learners do not concentrate on their work. They come to classes tired and hungry because of the long distances they have to walk to school. Some will fall asleep as you teach. This is really frustrating. How do you teach tired and hungry learners?”*

### 7.2.2. Managerial problems

The respondents complained about lack of support from the principals and inconsistencies in dealing with learner discipline.

*“...One boy fought with another one claiming that he had fought with his younger brother earlier on. Everything happened in front of me. Together with a colleague we took the aggressor to the principal's office. I thought the principal was going to punish the boy, but surprisingly, the learner continued to write exams. The parents were never called to the school and we were also not called upon to discuss the matter as educators who witnessed the incident. What message is the principals' behaviour sending to the learners? I was really upset.”*

Teachers also complained about school principals who do not appreciate the effort they put into their work, while others verbally harass teachers in front of colleagues.

*“The principal always want his presence to be felt mainly by not considering and appreciating my efforts in the school.”*

*“The principal embarrassed me in front of everyone. This is uncalled for. When I have done something wrong, he can talk to*

*me like an adult and a professional. Everyone needs to be treated with respect and dignity.”*

### 7.2.3. Teaching in schools where there are no resources

Teachers experienced problems regarding a lack of resources in some schools. The following are the responses of teachers on how the lack of resources affects their work as teachers.

*.....“Learners have to share computers. Resources such as data projectors are not available in our school”.*

*“One struggles when one wants to do experiments, for example in Life Sciences, learners just read experiments from their textbooks and do not do experiments”.*

### 7.2.4. Teaching learners from squatter camps or poor households.

Learners who come to school from very poor communities affect teachers as individuals and as professionals.

*“The learners come to school without stationery, as parents do not have money to buy them. They do not come to school regularly because they have to look after their siblings as the parents go out to look for occasional work (piece jobs).”*

*“How do you punish a learner for not having money to buy stationery. If you help one learner, you will end up helping all the learners in a similar predicament. This is sad and it pricks one's conscience. You end up feeling guilty for something which is not of your own making.”*

- Learner on learner violence: According to the respondents, learner on learner violence was prompted by mere bullying, learners that provoke others by making jokes that belittle or demean other learners, fighting over cultural beliefs and cultural intolerance. Incidences of constant bullying and provocation of learners by others are captured in the following excerpt:

*“The victim was bullied by this other learner, who demanded that the victim bring him money everyday. At the end the victim got tired of this, and stabbed him.. The whole class was disturbed and police were called to the scene to intervene.*

Disrespect for other cultures and cultural intolerance were also identified as shown:

*“Big boys bully the small ones. Those who come from initiation schools assault and ridicule those who have not gone to initiation school. Even those who come from initiation school fight one another as those who stayed for longer periods of time in initiation schools and completed their course, tend to undermine those who did not survive and end up in hospitals, and those on whom the operation was performed by a medical doctor instead of ingcibi.”*

“*Ingcibi*” is a Xhosa word referring to the man who performs the operation (circumcision) on boys at the initiation school, a traditional surgeon.

In addition to learner on learner violence, learner on teacher violence was also identified by the teachers in the study.

- Learner on teacher violence: Learner on teacher violence was triggered by teacher favouritism, use of corporal punishment, teacher mistreatment of learners, cultural clashes and a lack of respect from learners, especially those who had recently been initiated as indicated in the two excerpts:

*“The girls who fall in love with teachers get favours from those teachers and this causes disciplinary problems for other teachers especially females who tend to object to such tendencies”.*

*“It was after school when a boy from one Grade 11 class knocked at the window of another Grade 11 class shouting at the teacher to release the learners. When the lady teacher asked him why he did so, and that he should be taken to the disciplinary committee he slapped the lady teacher on the face. I was terrified because I thought that this could happen to me as well.”*

#### **7.2.5. Unprofessional conduct of some teachers.**

Unprofessional conduct included gossiping about others, teachers involved in intimate relationships with learners and those who come to school drunk.

*“Staffrooms have been turned into places for gossip. Educators discuss sensitive and personal issues of other educators with learners.”*

*“Teachers have affairs with learners. The other learner has been impregnated by a teacher at this moment and she is boasting that she is going to be married to the teacher”.*

*“Use of liquor during school time, unprepared-ness of educators, dodging of classes and absenteeism.”*

## **8. Effects of negative experiences on teachers**

Teachers had an opportunity to talk about how their experiences had affected them as well as their work.

### **8.1. Experiences on teachers as individuals**

Respondents have been affected emotionally by the episodes of violence in their school environments. Issues of shock, confusion and fear came to the fore.

*“It shocked me to see how student jokes can turn violent. I realised that they (students) do not know how to manage their anger”.*

Respondents felt intimidated, helpless and confused at times as excerpts show

*“It was scary and I felt it is not safe at schools and I was afraid to go to class or even face the learners. I was scared and confused. It affected me emotionally”.*

*“As a teacher I’ve realised that educators are not safe. We are working in dangerous situations whereby we cannot do or say anything. This type of behaviour affects the teaching situation negatively because you really cannot perform well in an unsafe situation”.*

*“As a person I felt that humanity no longer exists, moral behaviour is no longer important and human norms and values are no longer respected. In short, human life has become so cheap that people do not have conscience when they cause harm to others”.*

For some respondents the negative experiences provided a learning curve. They learnt to take the issue of learner differences seriously.

*“Such an experience has made me aware of how to handle the different learners. I am careful about the jokes that I make in class. In the Life Orientation class I teach them about violence and aggression and their consequences.”*

## **8.2. Effect on work performance**

- Unsafe school environments: Teachers expressed concern about their own safety and that of learners, as well as strained relations between them and learners.

*“The behaviour of the initiates sabotages the smooth running of the school and affects the safety of other learners as well. I also feel offended by some remarks that are hurled at other learners who have not been to the initiation school, because I have not attended the initiation school too, and I refuse to be called names. The initiates wear hats in class and when you ask them to take off their hats, they will tell you that they have to wear the hats for a certain period of time and that they do not take instructions from people who have not been to the initiation school.”*

- Lack of resources: A lack of, or inadequate resources, has had a demotivating and demoralizing effect on teachers.

*“This situation is demotivating and demoralising. ... I feel discouraged each time I have to go to class.”*

- *Lack of support*

When teachers report instances of violence or any form of misbehaviour of students to the school

principal, they need proper feedback on the action that has been taken to punish or to admonish the learner. Failure by school management to divulge information regarding the action taken against learner misbehaviour causes a lot of tension in the school. Teachers begin to mistrust school principals and other colleagues.

- Unprofessional conduct of some teachers

Consequences of unprofessional conduct included: a lack of respect and trust for such teachers, inability to instill discipline in class due to lack of discipline among learners and general tension among teachers. Respondents felt that teamwork and collaboration among teachers had been compromised.

## 9. Discussion of findings and recommendations

The discussion also focuses on negative experiences. Some principals were perceived as hindrances to teacher growth and development as they did not support teachers in their teaching endeavours, as well as in disciplining learners. Lack of resources also impacted negatively on teacher's efforts. All these forces act against effective teaching and learning. The consequences of these are teacher frustration, anger, demotivation and stress.

Positive interactions of teachers and learners are crucial to learning. Negative attitudes of learners towards their work, inattentiveness and disengagement in classroom activities, as well as their effects on teachers were identified. From the excerpts, however, it was observed that some learners come from poverty-stricken homes, while others stay far from schools. Hunger and fatigue could contribute towards learner disengagement and irritability.

The abolition of corporal punishment in South Africa has led to deterioration of discipline. Incidents of learner-on-learner violence and learner-on-teacher violence have been observed in this study, confirming the findings by other researchers [7, 8, 11]. Various forms of physical and verbal bullying not only affect teaching and learning adversely, but also infringe upon teacher and learner rights to teach and learn in a safe environment without fear [8].

Some authors [1] alluded to the apparent inability of many educators to manage learner behaviour. In this study such inability has been compounded by the abolition of corporal punishment and the recognition of learner rights. The rights of learners have been

misconstrued by some teachers and learners, making it difficult to have a common understanding of how to discipline learners. When confronted with a problem some teachers appeal to the school principal. They then felt betrayed, insecure and unfairly treated when they do not get the desired feedback from principals.

The recognition of cultural rights and practices is also creating disciplinary problems. Schools are now witnessing a new form of ill-discipline under the pretext of cultural rights. The new initiates disrespect the teachers and other learners who do not observe the initiation and circumcision custom and ritual. They refuse to wear school uniform, thereby creating disciplinary problems. Initiation schools are created to instil moral values of manhood and responsibility when boys proceed from boyhood to manhood. The practice is not meant to demean other cultural practices by making the lives of other people, including other learners and teachers, difficult by using "cruel teasing", and bad name calling as some of the excerpts in the study have shown. Schools have norms and traditions, school uniforms, rules and regulations, and all these have to be adhered to by all learners, irrespective of race, colour or creed. Cultural practices should not interfere with the smooth running of the school.

In conclusion the study has sensitised the researchers to the host of problems that teachers go through in their every day interactions, with managers, colleagues and learners. They have to be supported in their everyday endeavours.

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# School-readiness: Connecting Executive Function with Emergent Literacy

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## Abstract

*A definition of school-readiness should include aspects of emergent literacy and executive function skills. This descriptive study investigates possible correlations between these two important areas in early child development. Fifty preschool children, mean age 4:01 years, participated in a variety of widely accepted measures in each area two months prior to entry to kindergarten. Emergent literacy measures included the Test of Preschool Early Literacy (TOPEL) and Peabody Picture Vocabulary Test – III. Executive function measures included Child Attention Network Task (Child ANT), Flexible Item Selection Task (FIST), and the Peg Tapping Task. The Kaufman Brief Intelligence Test – 2 was used as a measure of non-verbal IQ. Data analysis is pending for this work in progress.*

## 1. Introduction

A preschool child's school-readiness can be defined as the minimum developmental level of skill, ability and attitude that stand as precursors to him or her being able to benefit from and contribute to the school environment at entry to formal schooling [26]. There are variations across researchers and school communities as to what specific skills, abilities and attitudes are included under the umbrella term "school readiness" [3], [15]. Executive function and emergent literacy skills are important aspects of school-readiness [2], [3], [25]. However, there are no known studies that examine school-readiness through the lens of possible interactions between these two important areas of early child development during the preschool years.

## 2. Executive Function

Executive function skills refer to higher-order cognitive abilities involving goal-oriented self-regulation [4]. Specific skills that fall under this umbrella term include planning, problem solving, orienting and initiation of action, self-monitoring, inhibition of response (including avoidance of

distraction) and delay of gratification [4], [9]. Self-regulation involves purposeful and planned behaviour (to initiate, maintain, delay or discontinue an action even if one does not want to) as opposed to reactive, unplanned behaviour [6]. Rapid development of these skills occurs between the ages of four and six [19], [27]. In the past decade investigators have identified behavioral methods of measuring executive function ability with preschool-aged children [10], [13], [20], some of which are used in this study.

Three areas of executive function skill are measured in this study. They are cognitive flexibility, cognitive control and working memory [9]. Cognitive flexibility (or "switching attention") represents the ability to change from one focus of thought to another. Inhibitory control involves the ability to avoid distraction in order to attend to the task or information at hand. This ability to avoid distraction allows an individual to make use of selective, focused attention [9]. Working memory involves holding information just learned in thought long enough to be able to perform some task or manipulation of the information, in spite of reasonable distraction. Researchers and kindergarten teachers consider these abilities more important than IQ or academic abilities (recognizing letters and numbers) [4], [9], [23], and have found them to be predictive of mathematics abilities later on [7].

## 3. Emergent Literacy

First coined by Marie Clay in 1966 [8], the term 'emergent literacy' refers to the continuous concurrent development of key skills and attitudes that begin in infancy and contribute to a child's success in early reading [25]. These skills include, but are not limited to, oral language development, concepts of print, letter naming knowledge, working memory and most notably phonological awareness, shown to be predictive of a child's ability to learn to read [1], [25]. Multiple factors, such as home environment, play a part in the status of these collective skills and attitudes at school entry [17]. The quantification of these acquired skills at the point of entry to school provides insight into the ready state of the child.



Skills measured in the current study include phonological awareness, oral language development (receptive and expressive vocabulary), letter naming knowledge, grapheme-phoneme correspondence [25]. Stanovich identifies deficiency in phonological awareness ability as responsible for early reading challenges but he identifies the resulting “causal chain of escalating negative side effects” of motivation and attitude toward reading and more importantly, themselves as readers, as the culprit for the resulting academic challenges for children who struggle to read [21]. Efforts to reach children considered at-risk for poor outcomes in reading prior to entry to formal school are important for circumventing the poor attitude and motivation likely to occur when the child feels unsuccessful.

#### 4. Current Study

The current descriptive study investigates the executive function and emergent literacy abilities of a group of 50 preschool-aged children within two months prior to entry to the first of a two year kindergarten program in Ontario, Canada.

### 5. Methods

#### 5.1. Participants

The participants in this study were 50 preschool children (mean age: 4.08 years; males = 30, females = 20) prior to enrollment in a summer intervention program for children entering Kindergarten in the fall. Ontario has a universal two year half day kindergarten program prior to children entering grade one. These children were enrolled in this summer program on the basis of a referral by a service agency or the child’s future school, or by request of the parent. The curriculum, School’s Cool© [18] has been delivered locally for several years in an effort to improve both the school-readiness skills and the attitudes of children who might be considered at-risk for school success. Eligibility criteria to participate in this research included entry to Kindergarten in the current year and no known history of neurological disorders and/or ADHD.

Parental informed consent was obtained for each child. Ethical approval was granted for this research by the University of Toronto.

#### 5.2. Measures

The Table 1 highlights the battery of tests used to measure the children’s progress in each area. A brief description will be provided for each measure.

**Table 1. Measures**

Domain	Measure	Purpose
Home Language and Literacy	Parent Questionnaire	-Language(s) of Home Environment -Literacy of Home Environment -Demographics
Cognition	KBIT-II; Non-verbal matrices	Non-verbal IQ
Emergent Literacy	TOPEL	-Phonological Awareness -Letter Naming Knowledge -Expressive Vocabulary
	PPVT-III	-Receptive Vocabulary
Executive Function	Peg Tapping Task	-Cognitive Control -Working Memory
	Child ANT	-Cognitive Control -Working Memory
	FIST	-Cognitive Switching

A Home Language and Literacy Parent Questionnaire was created for this study to gather information related to language(s) of the home, home literacy experience (number of children’s books in the home, frequency of reading to the child, etc.) and demographic information. The non-verbal matrices subtest of the Kaufman Brief Intelligence Test – Second Edition (KBIT2) [14] was used to obtain a measure of non-verbal IQ. The Test of Preschool Early Literacy (TOPEL) [16] was used as an indicator of the children’s phonological awareness, letter naming ability, phonemic awareness, and expressive vocabulary abilities. The Peabody Picture Vocabulary Test (PPVT-III) [11] is a frequently used measure of receptive vocabulary and was implemented here to provide a further measure of oral language development. These measures are all norm-referenced and provide an overall picture of a child’s emergent literacy ability.

Three widely accepted preschool executive function tasks were used to achieve a well-rounded perspective of a child’s executive function abilities: Peg Tapping Task [10] and The Child Attention Network Task (Child ANT) [20] for cognitive control and working memory and the Flexible Item Selection Task (FIST) [13], a dimension change card sorting task that provides an indicator of a child’s ability to use cognitive switching.

Diamond and Taylor's Peg Tapping Task [10] involves the experimenter asking the child to tap the wand on the table one time if the investigator taps his or her wand two times and to tap two times if the investigator taps one time. Given that many preschoolers (age 3.5 to 4.5) have not yet acquired the concept of opposite, they must hold in memory these 'two rules' and override the desire to imitate the investigator's taps. In the current investigation, if the child was able to repeat the 'rules' of how to play the game demonstrating the ability to learn the rules, ten trials were run. Given the age of the children, some were unable to repeat the rules back to the investigator and others were unaware of counting to one or two. These children were invited to play as if it were a drumming game and were excluded from this measure.

Rueda, Fan, McCandliss, Halparin, Gruber, Pappert Lercari and Posner created the Child ANT [20]. This computer-based task requires the child to focus on a stimulus on the screen and to 'feed the fish' that appears by pressing the left button if the fish is swimming toward the left and the right button if the fish is swimming toward the right. This task requires the child to disregard the direction flanker fish are moving. Some trials include other fish swimming in the same direction (congruent trials) and some trials include fish swimming in the opposite direction (incongruent trials). The child is instructed to respond only by attending to the designated fish at the point of the stimulus. Practice trials consist of 26 trials and if the child is able to learn how to play the game, 48 trials are run. The computer records accuracy of response as well as reaction times on an Excel spreadsheet. A Dell Inspiron 15" laptop computer was used with a cardboard sleeve designed to cover the keyboard and only make available the left and right click buttons typically used with the mouse. This covering was used to minimize the distractions of the other keyboard buttons.

Jacques and Zelazo's FIST [13] is a cleverly designed task that reveals the child's ability to use cognitive flexibility. The child is shown three cards and asked to match two cards on one dimension (size, color, number of items or shape) and then to match two different cards of the same three cards on a second dimension making use of one card twice. An example of one trial would be similar to this: the child is shown three picture cards, number one with two large purple fish, number two with one small purple phone, and number three with two small pink phones. Selection one made by the child might be card number one and number two because the items are both purple. Selection two would be correct if the child chose cards number two and three because they are the same shape, phones. This task is challenging because the child must disregard the first dimension selected in order to be able to choose a second pair of

cards. Two criterion trials were run and if successful, eleven sets of cards were presented and for each set the child was asked to make a first and second selection and to tell why they chose the cards at each selection. This allowed us to understand the child's reasoning in making a selection and to differentiate possible perceptual selections. One set of the original twelve cards was eliminated due to ambiguity in its design.

### 4.3. Data Collection Procedure

Data was collected during the month of July, 2009 in order to measure the children's skills prior to entry to the summer intervention program. The children completed all measures in the same order over two appointments. The primary investigator completed all measures with the help of a trained assistant who completed the TOPEL with a small group of the children. The child and investigator sat at a child-size table and chairs facing a corner of the room with plain walls in order to minimize visual distractions. A parent/guardian completed the Home Language and Literacy Parent Questionnaire sitting at a distance from the child.

Given the age of the children, some children were unable to meet the criteria for some of the measures (e.g., during the peg tapping task, there were children who did not know how to tap the peg one time versus two times) or children expressed disinterest in completing one task but wanted to continue with a different task. Thirty four children completed all of the measures in the battery.

### 5. Data Analysis

A set of one-way ANOVAs indicated no gender differences in the given tasks,  $ps = ns$ . First and foremost, the two-tailed Pearson correlations among the given tasks—KBIT, PPVT, TOPEL, Peg-tapping, and FIST revealed significant correlations between emergent literacy skills as measured by TOPEL and the two executive function measures, Peg-tapping,  $r = .35, p < .03$ , and FIST,  $r = .38, p < .02$ . These results confirmed the interactions between emergent literacy and executive function skills as two important concurrent developmental processes for school readiness. The non-verbal intelligence as measured by the KBIT displayed significant correlations with only two executive function measures,  $ps < .005$ . The emergent literacy skills and the KBIT performance were only marginally significant,  $p < .06$ . The receptive vocabulary knowledge as measured by the PPVT approached significance in correlation with the emergent literacy skills,  $p < .06$ .

Due to task demands, not all children were able to complete the ANT task, which is the reported

problem in the literature using the ANT with young children. The ANT correlated significantly with the KIBT,  $r = .68$ ,  $p < .001$ , and the peg-tapping,  $r = .44$ ,  $p < .05$ . The results may be indicative of the fact that these two executive function measures—ANT and peg tapping—may tap the same underlying mechanisms, inhibitory control, which is distinct from cognitive flexibility.

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## **Session 20: Curriculum, Research and Development**

Design of Repetitive Processes for School and Curriculum Improvement  
(Faten S. M. Abdel-Hameed, Salah A. A. Emara)

Curricular Implications of the Three States of Information as the Fourth Factor of Productivity  
(Ali Baykal)

Challenges Faced by South African High School Accounting Educators  
(Victoria Koma)

Towards a Curriculum of Consciousness: An African and Asian Interface for New Philosophy of Art and Contemporary Cultural Practice, Tested through Action Research  
(Ranjana Thapalyal)

A Study on the Effects of Teacher Attitudes on Children's Beliefs about Science  
(Berrin Akman, Mefharet Vezirođlu, Erhan Alabay, Pınar Aksoy)

# Design of Repetitive Processes for School and Curriculum Improvement

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## Abstract

*Schools' control choices are not at random, they are based on any of a number of factors. Some types of controls suit particular schools' styles better than others. A good control can be achieved without knowing exactly how employees and teachers will produce the results. Therefore, the effectiveness of the results measures is assessed. In this work, we give an example to model and explain the applicability of repetitive flow principles to disconnected flow processes for school and curriculum improvement. We assign daily tasks, and expect the line of production to be operating seven hours a day to produce a number of completed tasks. To find the expected completion time (t) for each activity, we provide three time estimates; optimistic time, pessimistic time and most likely time. We apply the positional weights for activities (tasks) to obtain the workstations. Measures of the efficiency of each workstation and production line are given.*

## 1. Introduction

Repetitive processes in education are described by a mathematical model using simplified assumptions of a series of school activities and their predecessors with time that masks the realities of an educational system. The interaction between successive activities is the basic source of the unique control problem for these processes. In this paper, we describe the contents and the methodology adopted for solving this problem and determines the production time rate for each workstation and the bottleneck workstation. Measures of efficiencies are obtained for each workstation and for the production line. This same method can also be used if it is desired to make repetitive processes for curricula activities.

## 2. Activity Time

Here, we discuss the detailed design of repetitive flow processes, which focus on balancing the assignment of work at work stations (WS), and explained the applicability of repetitive flow

principles to disconnected flow processes [1], [2], [3], [4].

We assign 41 daily tasks to 41 employees for one day with one task per person per prescribed time, to produce at least 120 tasks altogether as given in Table 1. We expect the line of production to be operating 420 minutes each day. At this stage of the study each activity will be assigned with an estimated time, the time required to complete each and every activity in seconds. Since providing the activity time estimate is a difficult task without a solid historical data, we will use the following three time estimates for each activity:

1. Optimistic time (a): Generally it is the time an activity will take if everything goes as well as possible.
2. Pessimistic time (b): Generally it is the time an activity would take assuming unfavorable conditions.
3. Most likely time (m): Generally it is the most time to complete the activity.

**Table 1. Task information for school activities**

	Activity	Predecessor	Time		
			Optimistic time (a)	Pessimistic time (b)	Most likely time (m)
1	A	-	30	50	40
2	B	A	30	30	30
3	C	B	33	53	40
4	D	C	15	25	20
5	E	D	20	28	21
6	F	D	37	47	36
7	G	D	31	41	30
8	H	D	35	53	41
9	I	D	30	32	28
10	J	D	23	25	21
11	K	E, F, G, H, I, J	34	40	34
12	L	K	18	22	20
13	M	K	15	19	17
14	N	K	20	25	22
15	O	K	40	40	31
16	P	K	18	20	19

17	Q	K	15	18	16
18	R	K	50	58	51
19	S	R	70	72	62
20	T	L, M, N, O, P, Q	86	90	82
21	U	D	23	27	22
22	W	T	40	50	39
23	X	T	68	70	60
24	Y	T	60	64	56
25	Z	T	50	54	40
26	AA	D	8	15	11
27	AB	U	5	8	7
28	AC	AA, AB	19	23	24
29	AD	S	60	80	61
30	AE	S	52	60	47
31	AF	S	30	32	28
32	AG	AF	25	25	22
33	AH	AE, AG	20	20	20
34	AI	AD, AH	20	32	22
35	AJ	AC, AI	16	18	14
36	AK	AJ	8	12	10
37	AL	AK	20	30	22
38	AM	AL	4	8	6
39	AN	AM	2	5	3
40	AO	AN	6	10	11
41	AP	AO	25	29	18
			Total		

To find the expected completion time (t) for each activity based on a, b, and m, we applied the following equation:

$$t = \frac{a + 4m + b}{6} \quad (1)$$

Table 2 presents the expected time (t) for school activities, as computed from equation (1) and the data given in Table 1.

**Table 2. Task expected time for school activities**

	Activity	Predecessor	Expected time (t)
1	A	-	40
2	B	A	30
3	C	B	41
4	D	C	20
5	E	D	22
6	F	D	38
7	G	D	32
8	H	D	42
9	I	D	29
10	J	D	22
11	K	E, F, G, H,	35

		I, J		
12	L	K	20	
13	M	K	17	
14	N	K	22	
15	O	K	34	
16	P	K	19	
17	Q	K	16	
18	R	K	52	
19	S	R	65	
20	T	L, M, N, O, P, Q	84	
21	U	D	23	
22	W	T	41	
23	X	T	63	
24	Y	T	58	
25	Z	T	44	
26	AA	D	11	
27	AB	U	7	
28	AC	AA, AB	23	
29	AD	S	64	
30	AE	S	50	
31	AF	S	29	
32	AG	AF	23	
33	AH	AE, AG	20	
34	AI	AD, AH	23	
35	AJ	AC, AI	15	
36	AK	AJ	10	
37	AL	AK	23	
38	AM	AL	6	
39	AN	AM	3	
40	AO	AN	10	
41	AP	AO	21	
			Total (T)	1248

We want to assemble a line to produce at least 120 completed tasks per day and expect the line to be operating 420 minutes each day.

$$\begin{aligned} \text{(Working) day} &= \text{operating time each day} \\ &= 420 \text{ min} = 25,200 \text{ sec} \end{aligned} \quad (2)$$

$$\begin{aligned} \therefore \text{Maximum cycle time} &= C_{\max} \\ &= 1 / (\text{minimum desired production rate}) \\ &= 1 / (120 \text{ completed tasks per day}) \\ &= \frac{1 \text{ day}}{120 \text{ completed tasks}} \quad (\text{substitute from (2)}) \\ &= \frac{25,200 \text{ seconds}}{120 \text{ completed tasks}} = 210 \text{ sec/ completed tasks} \end{aligned}$$

$$\therefore C_{\max} = 210 \text{ second/ completed tasks} \quad (3)$$

Now, we divide these tasks over theoretical workstations (WK's) as:

Theoretical minimum number of workstations =

$$\left\lceil \frac{T}{C_{\max}} \right\rceil = \left\lceil \frac{1248}{210} \right\rceil = \lceil 5.94 \rceil = 6 \text{ WS} \quad (4)$$

(where  $\lceil \cdot \rceil$  means round up of any fractional values). The basic idea from constructing the production line is to assign as much work to each workstation (WS) as possible without exceeding  $C_{\max}$ . To obtain the actual number of workstations and the actual production per day we apply the Ranked Positional Weighted Technique (RPWT), where the RPWT is applied to measure the task's importance as a predecessor. From the Table 2, we construct a diagram of the precedence relationship among the tasks. Arrows are used to show which tasks must precede others. This is shown in the following figure:

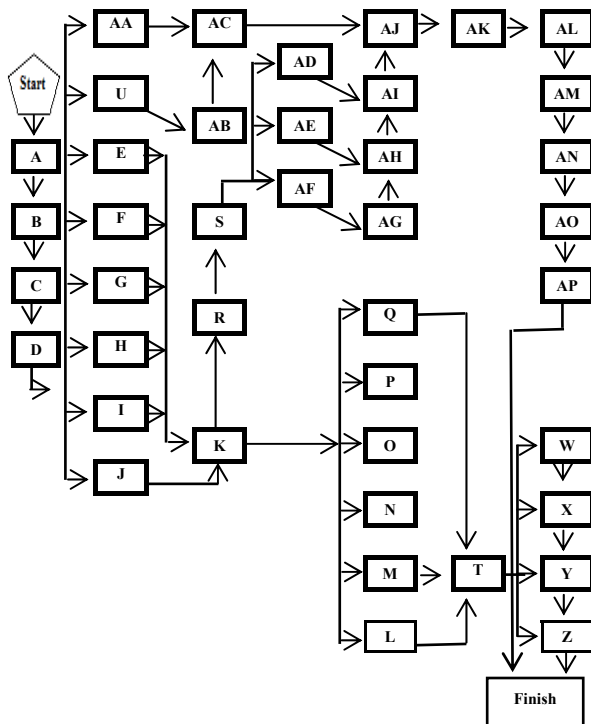


Figure 1. Procedure diagram for the school activities

For each task, add up the task time for that task and all the tasks times which follow it directly and indirectly. This value will be called the Positional Weight for the task.  $PW(A)$  denotes the positional weight for task A, and it is computed from the sum of the task times for the tasks: A, B, C, D, AA, U, E, F, G, H, I, J, AC, AB, S, R, K, AD, AE, AF, Q, P, O, N, M, L, T, AJ, AI, AH, AG, AK, AL, AM, AN,

AO, AP, W, X, Y, Z, i.e.,  $PW(A) = 1248$ . Similarly we obtain the positional weights for all the remaining tasks as,  $PW(B) = 1208$ ,  $PW(C) = 1178$ ,  $PW(D) = 1137$ ,  $PW(E) = 825$ ,  $PW(F) = 841$ ,  $PW(G) = 835$ ,  $PW(H) = 845$ ,  $PW(I) = 829$ ,  $PW(J) = 822$ ,  $PW(AA) = 122$ ,  $PW(AC) = 111$ ,  $PW(U) = 141$ ,  $PW(AB) = 118$ ,  $PW(S) = 326$ ,  $PW(R) = 414$ ,  $PW(K) = 449$ ,  $PW(AD) = 175$ ,  $PW(AE) = 181$ ,  $PW(AF) = 183$ ,  $PW(AG) = 154$ ,  $PW(AH) = 131$ ,  $PW(AI) = 111$ ,  $PW(AJ) = 88$ ,  $PW(AK) = 73$ ,  $PW(AL) = 63$ ,  $PW(AM) = 40$ ,  $PW(AN) = 34$ ,  $PW(AO) = 31$ ,  $PW(AP) = 21$ ,  $PW(Q) = 242$ ,  $PW(P) = 245$ ,  $PW(O) = 260$ ,  $PW(N) = 248$ ,  $PW(M) = 243$ ,  $PW(L) = 246$ ,  $PW(T) = 226$ ,  $PW(W) = 206$ ,  $PW(X) = 165$ ,  $PW(Y) = 102$ ,  $PW(Z) = 44$ .

Table 3 displays the positional weight of each activity:

Table 3. Task times in seconds and positional weights for the school activities

	Activity	Expected time (t)	Positional weight PW
1	A	40	1248
2	B	30	1208
3	C	41	1178
4	D	20	1137
5	E	22	825
6	F	38	841
7	G	32	835
8	H	42	845
9	I	29	829
10	J	22	822
11	K	35	449
12	L	20	248
13	M	17	248
14	N	22	243
15	O	34	260
16	P	19	245
17	Q	16	242
18	R	52	414
19	S	65	362
20	T	84	226
21	U	23	141
22	W	41	206
23	X	63	165
24	Y	58	102
25	Z	44	44
26	AA	11	122
27	AB	7	118
28	AC	23	111
29	AD	64	175
30	AE	50	181
31	AF	29	183
32	AG	23	154



33	AH	20	131
34	AI	23	111
35	AJ	15	88
36	AK	10	73
37	AL	23	63
38	AM	6	40
39	AN	3	34
40	AO	10	31
41	AP	21	21

From the fourth column of the above table we arrange the tasks according to their positional weights from highest to lowest as in Table 4, by selecting the task with largest positional weight and assign it to be the first workstation, and next we select the task with next largest positional weight, then repeat the same for the rest of tasks. i.e., we select A first because it has the largest positional weight, and assign it to workstation WS<sub>1</sub> (workstation 1), the second highest (largest) positional weight will be activities: B, C, D, H, F, ... etc.

**Table 4. Task Times in second arranging the positional weights for the school activities in descending order**

	Activity	Expected time (t)	Positional weight PW
1	A	40	1248
2	B	30	1208
3	C	41	1178
4	D	20	1137
5	H	42	845
6	F	38	841
7	G	32	835
8	I	29	829
9	E	22	825
10	J	22	822
11	K	35	449
12	R	52	414
13	S	65	362
14	O	34	260
15	M	17	248
16	L	20	248
17	P	19	245
18	N	22	243
19	Q	16	242
20	T	84	226
21	W	41	206
22	AF	29	183
23	AE	50	181
24	AD	64	175
25	X	63	165

26	AG	23	154
27	U	23	141
28	AH	20	131
29	AA	11	122
30	AB	7	118
31	AI	23	111
32	AC	23	111
33	Y	58	102
34	AJ	15	88
35	AK	10	73
36	AL	23	63
37	Z	44	44
38	AM	6	40
39	AN	3	34
40	AO	10	31
41	AP	21	21

Now, we obtain the workstations as:

$$WS_1 \quad \boxed{A \quad B \quad C \quad D \quad H} \\ \text{Task time} = 40 + 30 + 41 + 20 + 42 = 173 < C_{\max} = 210$$

$$WS_2 \quad \boxed{F \quad G \quad I \quad E \quad J \quad K} \\ \text{Task time} = 38 + 32 + 29 + 22 + 22 + 35 = 178 < C_{\max} = 210$$

$$WS_3 \quad \boxed{R \quad S \quad O \quad M \quad L \quad P} \\ \text{Task time: } 207 < C_{\max} = 210$$

$$WS_4 \quad \boxed{N \quad Q \quad T \quad W \quad AP} \\ \text{Task time} = 192 < C_{\max} = 210$$

$$WS_5 \quad \boxed{AE \quad AD \quad X \quad AG} \\ \text{Task time} = 200 < C_{\max} = 210$$

$$WS_6 \quad \boxed{U \quad AH \quad AA \quad AB \quad AI \quad AC \quad Y \quad AJ \quad AK} \\ \text{Task time} = 190 < C_{\max} = 210$$

$$WS_7 \quad \boxed{AL \quad Z \quad AM \quad AN \quad AO \quad AP} \\ \text{Task time: } 107 < C_{\max} = 210$$

The workstation with longest time (C = 207 second/ task) is called the bottleneck workstation, obtained at WS<sub>3</sub>. The actual production rate for the production line is given by:

$$p = \frac{1}{C} = \frac{1}{207 \frac{\text{second}}{\text{task}}} \quad (5)$$

$$\therefore \text{day} = 25,200 \text{ seconds}$$

$$\therefore \text{second} = \frac{1}{25,200} \text{ day} \quad (6)$$

(since the operation time is 420 minutes =  $420 \times 60 = 25,200$  sec).

From (5) and (6) we get the actual rate

$$p = \frac{1}{C} = \frac{1}{207 \frac{1 \text{ day}}{25,200 \text{ task}}} = \frac{25,200 \text{ task}}{207 \text{ day}} = 121.739 \text{ tasks/day}$$

Therefore, the actual rate of production is 121.739 tasks/ day, which is greater than the target production rate 120 tasks/ day, since

$$\text{Actual cycle time } C < \text{max cycle time } C_{\max}$$

### 3. The Efficiency or Percentage Balance

The efficiency or percentage balance of a line is obtained by:

Efficiency (percentage balance) of a line

$$= \left[ \frac{T}{N \times C} \right] \times 100 \% \quad (7)$$

Where, N is the number of actual workstations. In our case: N = 7 WS's, C = 207 second/ task, and T = 1248 seconds.

$$\begin{aligned} \therefore \text{Efficiency of a line} &= \left[ \frac{1248}{7 \times 207} \right] \times 100 \% \\ &= 0.8613 \times 100 \% = 86.13 \% \end{aligned}$$

i.e., the efficiency or percentage balance of the line equals 86.13%, this means that the capacity wasted (idleness) is equal to 13.87 %.

Here, we evaluate the idleness for each work station: WS<sub>3</sub> is working at 100%, while efficiency (WS<sub>1</sub>) = 83. 57%, efficiency (WS<sub>2</sub>) = 85. 99%, efficiency (WS<sub>4</sub>) = 92.75%, efficiency (WS<sub>5</sub>) = 96.62%, efficiency (WS<sub>6</sub>) = 91.79% and efficiency (WS<sub>7</sub>) = 51.69%, with idleness of: 16.43%, 14.01%, 7.25%, 3.38%, 8.21% and 48.31%, respectively.

### 4. Conclusion

The main focus of the study describes the algorithm and mathematical methodology for solving a repetitive processes problem for school and curriculum improvement. The interaction between successive activities was obtained in order to control those processes for the sake of achieving the desired efficiencies for the production line.

### 5. References

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# Curricular Implications of the Three States of Information as the Fourth Factor of Productivity

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## Abstract

*Classical factors of production depreciate as used, also when not used. Land is subject to degradation, degeneration, and pollution etc. Capital can be stolen by inflation, devaluation. It can be worn out, outmoded, corroded as time goes by. Aging, corruption, disintegration, fatigue are just a few examples of many modes of labor atrophy. Information is outdated daily but only when updated with a new one, a better one. Land can be invaded, labor can be arrested, capital can be captured but information goes wherever the owner moves. The more available the information is the more it can be used to convert low value raw resources into value added resources. Expanding information tends towards disorganized collection of assertions unless creatively contracted into a viable curriculum. Curriculum development has to be a continuous research and evaluation process for the refinement and reorganization of information content of the educational intervention.*

## 1. Introduction

Land, labor and capital are the triumvirate factors of production in classical economics. Classical triumvirate of production fails to explain the total growth. It has been estimated that knowledge production and distribution account for almost one third of GNP [1].

## 2. First state of information: Land

Land was the limiting factor in the agrarian economy. In the “information age” technical and managerial skills can replace land really not virtually. Construction technology replaced the land by multiplying the available amount. Vertical growth of cities proves how effective construction technology is. TVs and PCs with CRT occupied almost a square meter area each in residential units. Somebody should calculate the annual alternative rent cost of those areas in New York for instance. When flat screen TV's are hung on walls, there will

be larger space in living rooms. It is liquid crystal technology and micro chip know how that will set those invaded lands free. Coastal fish-farming, continental shelf-mining, dessert glass houses are other examples of how knowledge multiplies the land resources [1].

## 3. Second state of information: Labor

Almost three fourths of employment was in the farms in the middle ages. On those days malnutrition was a problem even in Europe. Nowadays the employment in agriculture can hardly exceed %10 in developed countries. By getting information via satellite about the ripening of grapes this small percentage produces lakes of wine. In developed countries the problem now is not starvation, but obesity due to butter mountains produced by a few farmers with abundant know how.

Unskilled manpower doesn't mean anything but unemployment in economical terms, insecurity, infuriation and potential for crime in sociological sense.

At first glance, unemployment might seem to be highly correlated with the employment rate of technology. Strikingly however unemployment rates are smaller in advanced countries than technologically deprived ones. In the long run, knowledge is the nutrition for imagination to create new designs for things and better plans for events. In short, technology gives birth to new employment patterns, original job combinations. Printing press displaced many clerks but opened a vast variety of new jobs directly or indirectly. There are many tasks taken over by computers from men and women, but there are many more new ones which were impossible without computers. Technology creates new needs unknown before, and new demands need new suppliers [1].

By the advancement of science and technology, a small proportion of labor force is expected to satisfy the material needs of the society. Needs left to be fulfilled are social, psychological and intellectual in nature. Not survival but happiness is what man strives for. In terms of proportions, the service

sector, especially health, education and leisure industries will supersede material production industries such as food, textile, appliances etc.

In the developed countries the “services” sector is dominant in employment and production patterns. Industrial sector precedes the “services”, and agricultural sector ranks third. It is hard to displace some portion of work force without enlarging the information stock of the remaining part.

Capital embedded in machinery dislocates quite a large part of labor. But in fact, this is an example of how information displaces labor because every machinery is essentially a stock of information rather than being capital in disguise. Replacement of labor by knowledge manifests itself in two modes: First, automation displaces the unqualified physical work force. Porters, welders, farm workers, clerks are being replaced by robots; information operatives are displacing the machine operatives [1].

Labor input makes wool more valuable by knitting it into cloth. It is obvious that uninformed laborers plus training become skilled operatives.

#### **4. Third state of information: Capital**

McLuhan labels money as the “poor man's credit card” [2]. Knowledge displaces capital by decreasing the cost of production, increasing the efficiency and promoting the sales. Post industrial capital is no longer paper money but credit which is nothing but confidential information. As a matter of fact, in every society gold reserves are likely to be very much less than the money in circulation. Money, in turn is very much less than the capital in action. The discrepancies are compensated by virtue of information. Banks in Switzerland capture capital by collecting and storing economic, social and political information. Capital stored up in machinery adds value to metal plates by processing them into cars. An empty CD can be afforded with a pocket money of a teenager. When loaded with information it can be a fortune for a software company. The wealth of information is not created by the capitals of the richest people, but it's the information which generated the richest people of today. Behind all these it is the information input as a value resource. Every machine contains in itself accumulated information. All of these demonstrate how information displaces, replaces and multiplies capital.

#### **5. Fourth dimension in productivity: The nature of information**

In the pre agricultural era whatever nature supplied was sufficient for survival. In agrarian economy the limiting factor to produce enough food was the amount of fertile land. Almost three fourths of the

population worked on farms but hunger was still a serious problem. In an industrial economy, at most ten percent of the population is engaged in agriculture and still they can produce mountains of butter and lakes of wine. Capital, not land, appears to be the limiting factor as industry develops. In the highly developed countries, it has been estimated that knowledge production and distribution account for almost one third of GNP. Land, labor and capital are the triumvirate factors of production in classical economics. Classical triumvirate of production fails to explain the total growth. Land, labor and capital can hardly substitute each other. All three of them diminish when split, and perish when inflated. Knowledge resides in the human mind. The more available it is the more it can be used to convert low value raw resources into value added resources. Information can readily be shared with a negligible cost without significant loss. Information is reproducible and transportable.

Information can replace all of the classical factors of production to a great extent. Information replaces land by multiplying the available amount. Information substitutes capital by spiraling it via productive circulation. Information surrogates labor by simulating and extending its capabilities.

All of the classical factors of production obey the law of conservation:

No matter how large the land is, it diminishes when divided.

No matter how huge the capital is, it dissolves when distributed.

The more complex the machinery is the more easily it collapses.

No matter how abundant the labor is, it vanishes when dispersed.

Distribution manifolds and proliferates information.

All three of classical factors of production depreciate as used, also when not used.

Land is subject to degradation, degeneration, and pollution etc.

Capital in the form of money can be stolen by inflation, devaluation. It can be lost, burn etc.

Capital in the form of machinery will be worn out, outmoded, corroded etc. as time goes by.

Aging, corruption, disintegration, fatigue are just a few examples of many modes of labor atrophy.

It's true! Information is outdated daily but only when updated with a new one, a better one.

Land can be invaded, labor can be arrested, capital can be captured but information is duty free, it goes wherever the proprietor moves.

Information propagates at the speed of light. Words can be printed, sounds can be recorded, charts can be photocopied. The video arrests motion, the computer breeds data. Ranging from blackboard to satellite TV broadcasts, all kinds of media multiply the message and transport it to the audience.

The admiration of scientific and technological explosion should not go beyond the healthy respect for well-practiced knowledge. However praiseworthy the revenues of information are its detrimental price should also be considered. Global warming, nuclear bullets in “full metal jacket”, lethal war machines, poisoned air, putrid soil, soiled water, food with excess hormones are also the upshots of information bang. The struggle against nature may end up with a crushing defeat. The only hope is that it’s still the more refined information to restore the ruins left from the misuse of information.

The way it fertilizes the land, the way it capitalizes the capital, the way it makes the labor competent the information will hopefully make amendments on itself. It could still be the scientific information armored with philosophical and educational information to heal the wounds due to information.

## **6. The Impact of information**

In an agrarian society land owners gripped the power to rule. In industrial economies capital holders took over the political power. Under the pressure of advancing technology, Human Capital which is composed of technological expertise, organizational competence and managerial skills is likely to direct the world. Democracy displaced aristocracy, meritocracy leads democracy. As a matter of fact, information has always been the basis of organizations. Sultans, kings, commanders, thieves, fortune tellers, statesmen demanded to be supplied with more accurate and more recent information. Future scenarios alternate with each other according to the mood of their authors. There is one thing definite, that information is also producing a revolution in social organizations as well as in economic rituals. “While the rich man enjoys his money, the poor gets tired of talking about it”

The other side of the coin is poverty. Most of the countries and the nations are living in poor conditions. Being unsuccessful in “water improvement” is discomfoting. This fact is the main cause of high infancy rates in underdeveloped countries. One of the immediate suggestions could be the empowerment of parents with appropriate “information”. Radio and TV would be of great help to disseminate such information continuously.

Later is better than never, but the developed countries are not waiting developing ones to catch up with themselves. They are making advancements in artificial intelligence, pattern recognition, speech recognition, wireless telecommunications, and “ever newer generation” networking technologies.

Today the computer is still a messenger, message conveyor, code transformer, signal transmitter.

Will there be the computer tomorrow, or any other creature which (who) can generate messages?

Many of the convergent cognitive human skills such as recall, recognition, identifying, classifying, matching, sorting, scaling, correlating, conversion, translation, computing are taken over by today’s computers. Computers are performing those skills quickly, accurately, effectively, and efficiently.

But, all of these are still under the control of human species yet. Since yesterday’s science fiction is today’s reality -under the most rudimentary temptation to extrapolate- one can’t stop asking the question:

Will there be machine species which can enjoy divergent skills of human beings such as originality, flexibility, fluency namely creativity? The question is simple, but the answer is difficult.

The point is if this is not the end of the ascend of mankind technological progression will soon adopt a new phase. All of the material collection and the mental buildup will undergo metamorphosis.

An underdeveloped country will be like a “it” in the puss-in-the corner game. The rules of the game will be set by the mighty, and will be reset by the mightier. Shortly there needs to be a paradigmatic shift from taking a model to being a model. Since the models will change themselves very often, most of the replicate but late investments may end up with waste or devastate.

### **6.1. Information input: Curricular censure**

School curriculum can be completely alien to information explosion in the world, but shows allergic sensitivity to political issues. In Turkey there had been textbooks on physics which were used in schools more than twenty-five years without any change in their content. During this period, the Turkish industry eliminated vacuum bulbs and adopted transistors; within a short while transistors were replaced with integrated circuits. Triode lamps survived in textbooks. While students are playing with chips in their leisure, they are subject to fail if they cannot recall outmoded information. Formal and non formal education are treated as distinct categories. The uniform curricula presently used are not relevant to the diverse aims and policies of national development.

### **6.2. Uninvited input: Authority transfer**

French politician Clamenceau was known to have said that “War is too serious so as not to be left up to soldiers”. There may be some people who are successful in their field of specialization who adapt this aphorism to the field of education “Education is too serious so as not to be left up to educators”. They may be really very bright, well educated, assertive, perceptive, quick minded, articulate etc. Sometimes these professionals may become interested in educational issues. Most of these times

some of these people spend their time, exercise their effort, use their intuition and enjoy their power in educational forums. By shielding themselves with their authority gained rightfully in other fields they offer their wishful thoughts, college memories, pet ideas, and well packed opinions generously. Educational Sciences are very rudimentary, embryonic at the moment yet there are some terms, concepts, principles, theories, philosophies filtered through the experiences and formed an accumulated body of knowledge. Without being aware of this modest legacy they can hardly achieve “quality” in education but they can qualify what they can achieve as what the quality is. Even worse than that a very few foxy authorities may appear sometimes. Those times are the times that sizeable funds are allocated to some promising projects in education. Obviously projects in education are multidimensional, interdisciplinary in nature. Therefore educators need help from the disciples of other domains. Those voyagers step in the domain of education promptly, capture the funds but deposit the projects. This is the reason why “Corruption Perceptions” is among the developmental indicators from the very beginning.

According to Turkish moral laws before blaming the others one must be self critical first. They say something like that: *“Just push a pin into your own skin a little, and then attempt to immerse the needle to somebody else’s body”*. Patterson writes at the beginning of his book:

*...no psychological theory of instruction is provided as a bridge between philosophy and practice. Methods courses are universally rated as of little value and are disliked by students. In part, at least this is because of the lack of a theoretical base [3].*

Copeland concludes at the end of his book:

*Unfortunately, teaching has not become a science. We have not done the necessary research to be recognized as professionals [4].*

## **7. Allocation of resources: Meat for the horse, wheat for the wolf**

Learning is still a mystery. There are still as many learnings as there are learners. Laws of learning are not known yet. What is to be done to enhance intuitive and creative learning cannot be predicted from available learning theories. Neither Montessori’s “absorbent mind” nor the Piaget’s “formal operations” can give immediate practical cues to teachers for their daily conduct. Skinner’s reinforcements may explain how the frequency of behavior increases but it does not help the prediction of reinforcing stimuli. Bandura’s cognitive elements can be understood but can hardly be disseminated whenever needed [3]; [5].

Writing high level objectives in terms of Bloom’s taxonomy cannot guarantee attaining them. Perseverance is still a prerequisite rather than a controlled instrument for mastery learning.

Bruner tries to apply Piaget’s principles to accelerate learning, but Piaget remarks that:

Acceleration of learning always amuse students and faculty in Geneva, for they regard it typically American. Tell an American that a child develops certain ways of thinking at seven, and he immediately sets about to try to develop those same ways of thinking at six or even five years [4].

The problem in applying very few principles of learning is that the learning characteristics of individuals are as unique as their finger prints. Therefore what is appropriate for someone may not be appropriate at all for somebody else. This is one of the many other reasons why the human dimension (teacher) is indispensable in an instructional system. By the same line of reasoning, no matter how advanced it is no ICT application can replace an instructional system as a whole. When “properly configured” ICT can increase the productivity of an instructional system as a whole.

## **8. Integrated Curriculum: The proposal**

Relevant or irrelevant as they may be, on every occasion all along this report “system thinking” has been referred as the guiding principle neither as a dogma nor as a cliché.

Curriculum plans should be developed based on the proposed features of school curricula. The attributes prescribed -implicitly or explicitly- aims at contributing to the solution of instructional problems by applying systems concepts, principles and management activities. The present curricula at all instructional levels which might be characterized mainly by being aggregated, teleological, uniform, rigid, disorganized and formalistic should be replaced with a system which relies on integration, differentiation, flexibility, management orientation and vitality.

These attributes are expected to help harvesting the following:

1. Students will have an opportunity for a vocational/technical training in their academic interest areas.

2. All who demand will be supplied with the training and skills development assistance regardless of their age, sex, religion, prior education etc.

3. Workers already employed in industry will be trained for emerging skills.

Formal and non-formal aspects of academic, vocational and technical education ought to be integrated within the framework of this curriculum concept. The model assumes that the assessment of the educational needs of students and professionals living in the immediate environment is essential. Pre

service and on the job training requirements of non qualified and semi qualified workers in the industry and service sectors are to be given high priority. Depending on the training areas chosen, specific curriculum development teams can be formed and the curricula can be prepared based upon learner characteristics, content and job requirements.

Small scale institutional management will be adequate for the arrangement of development needs and services. On the job training of school managers and administrators, development of learning materials, up grading the available resources, induction of educational technology, and teacher training are to be done. The needs of the sectors are varying and changing. They must continuously be assessed. Necessary adjustments must be incorporated to the curricula with respect to evaluative follow up research. Evaluation is essential for the following reasons:

1. Even in the affluent countries, financial considerations are an obstacle to investments for curriculum development. The less the investment is, the greater will be the tendency to sacrifice quality.
2. Over conservative or over enthusiastic attitudes of teachers, parents and administrators can be overcome by showing objective evidence.
3. The mysteries of how students learn can only be unraveled by evaluation research. Curricula made up of stored information seldom fit the students' learning route, assimilation rate, and cognitive style.
4. Student evaluation is the common practice in conventional courses. Those who cannot learn are subject to failure without considering the inefficiency and ineffectiveness of the program
5. Lack of expertise in handling the new educational technologies can only be gradually overcome by training and re training under the light of evaluated experience.

Present educational testing theory implies that for a reliable and relevant evaluation of behavioral performance students should be discriminated. It is just the opposite way of saying interindividual discriminations should be valid and reliable. Because the true-score theory borrowed from psychometrics rests on the assumption that error is random. Education, teaching, learning, and communication processes however have to be error reduction mechanisms. Simply randomness is the error in systematic interventions which are supposed to be deliberate, intentional, purposeful, premeditated undertakings.

Normal curve is definitely useful for delineating some natural events, surprises and expectations in gambling. The purpose of educational enterprise is not to obtain a normal curve but rather to straighten it. The evolutionary sequence of data information, knowledge, wisdom takes time and effort.

## 9. Final words

Only a small fraction of a society produces knowledge. Yet scientific knowledge doubles in every decade because 90 percent of scientists and engineers ever known in history are alive. They are accelerating the body of theoretical and practical knowledge. Biologically, the brain of a contemporary, Nobel Prize winning physicist is not so much ahead of Newton. But an ordinary school boy has to know much more physics than the Sir has ever discovered. It is the responsibility of educational institutions to harness the exploding information. Information is expanding without any other obvious limits but time. Expanding information tends towards entropy (disorganized collection of assertions) unless creatively contracted into a viable curriculum. Curriculum development has to be a continuous research and evaluation process for the refinement and reorganization of information content of the educational enterprise. In the information society education may not be better, may not be easier; but it is already different [1].

Educational objectives of information society are creativity, critical thinking, inventiveness, inquiring mind, tolerance and the like [6], [7], [8]. Absorbing memory, conformity, routine skills have long been outdated. All programmable functions of man can be imitated by machines. Deep theoretical understanding will dominate broad knowledge [9]. Teaching learning interactions will take place in physical settings different from the conventional ones. Electronic classrooms, computer labs are already common in most of the schools. Cognitive aspects of learning will take place at home [10].

In a democratic society school cannot be an ideological state apparatus any more [11]. Schools have given up their functions as selecting and sorting agencies for so many years. In fact there are and if not there can be more reliable certifying agencies. Digital memory took over the power of the "gray matter". Artificial intelligence is knocking the door, but schools will survive as long as people need other people. Goleman asserts succinctly:

*In a very real sense we have two minds, one that thinks, and one that feels [ 8], [12].*

According to Goleman, a high academic IQ is not enough for prosperity, prestige or happiness in real life [12; 34-38]. Since schools emphasize academic aptitude but ignore emotional intelligence, murder, aggravated assault, robbery, and forcible rape is increasing. Schools must teach the essentials of handling anger and resolving conflicts positively. Also empathy, impulse control, and other fundamentals of emotional competence will have to be the primary educational objectives very soon. Juvenile delinquency, drug abuse are becoming common problems at most of the high schools lately [13]. Social interactions move from formal, role

dominant styles towards informal, personality relevant styles. Emphasis is being given to the requirements of the individual rather than the institutional structure. Variable group size, heterogeneous grouping, dynamic scheduling tend to replace fixed size, homogeneous grouping and fixed interval schedules. The modes and methods of instruction will undergo a metamorphosis. Discovery strategies have to replace the expository ones. Knowledge transmission can be accomplished better by audio visual equipment than by a teacher. Instructional design will replace the routine lesson plan paradigm [14].

Individualized tutorial guidance will be the basic mode of teaching. To illustrate, Stonier states:

*The expansion of information will make it increasingly difficult for teachers to keep up with new developments. At the same time it will allow students to become 'experts' at a much earlier age. As a result of the decentralization and democratization of education, there will be increasing reliance on students teaching teachers. The common effort of exploring new knowledge can be extremely rewarding. It is probably very much more efficient as a method of effective learning than the traditional hierarchical one way approach which is the basis of contemporary education [1; p. 179].*

Shortly contemporary education will be based on information which is a basic possession of the universe. Like matter and energy, information has physical reality. Any system as an organized complexity contains information. The information content of educational systems can be represented by changes in entropy [15], [16]. Achievement as the basic aim of instructional systems can be measured as the amount of entropy removed [17].

## 10. Acknowledgement

The author extends his gratitude to the memory of Tom Stonier who became a life time teacher in a shortwhile Science and Society course in Bradford in 1984.

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# Challenges Faced By South African High School Accounting Educators

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## Abstract

*South African employers expect quality graduates from higher education and higher education expects quality learners from the school system. None of these expectations have been fully met so far and the blame for this largely falls on the school system. The South African school system has undergone major changes since 1994, which has resulted in teachers having to adapt to new ways of teaching and in the process faced many challenges which lead to the production of learners that are inadequately prepared for higher education and employment. Accounting is one of the gateway subjects in which learners are not adequately prepared. This research therefore aims to articulate the challenges that high school accounting teachers face which might be considered as the cause for the school system producing inadequately prepared learners.*

## 1. Introduction

In South Africa there has been for the past few years a cycle of blame amongst employers, higher education institutions and the school system. Employers blame higher education institutions for not adequately preparing graduates for the world of work. In turn higher education institutions blame the school system for sending out to higher education learners that are inadequately prepared for higher education. These are observations that I have made as an educator in higher education for the past six years and have also experienced the difficulty of teaching learners who have limited background knowledge or basic knowledge of a subject that they have learned in school. My observations and experiences were also confirmed by a recent debate in a current affairs programme on the South African Broadcasting Corporation (SABC) about the preparedness of learners for higher education [1]. The debate stemmed from research done by Higher Education South Africa [6]. This employer–higher education–school system cycle of blame needs to be addressed as a matter of urgency. This cycle of blame seems to be even more prevalent within accounting education.

## 2. Accounting Education

Accounting education research, general media publications and accounting educators continuously blame the school system for not doing enough to prepare learners for accounting related courses in higher education and this blame falls on accounting teachers in high schools. An employer at an accounting firm wrote an article in a newspaper about not being satisfied by the ability of recent graduates to do their work. The employer's dissatisfaction was about the graduates not knowing what a debit and credit is and also not being able to complete a basic income statement and balance sheet that the learners should have learned in high school (grade 10). The employer questioned the credibility of higher education institutions [8].

The employers of accounting graduates and higher education institutions have stated their challenges within accounting education in research and other publications. From this the assumption can be made that they have the ability to overcome their challenges [3], [9]. The problem that remains therefore is the school system which is visibly represented by teachers who teach accounting to learners in high schools.

## 3. The South African School System

Currently in South Africa the school system is classified under the Basic Education Ministry of Education. The current curriculum that is used in basic education is the National Curriculum Statement (NCS). The NCS is based on the foundation laid by Outcomes-Based Education (OBE) [4] which has been operational in the school system since the new democratically elected South African government came into power in 1994 [2]. Before 1994 the school system was characterised by uniformity, lack of adaptability, extreme competition between learners, who were passive and often learned factual knowledge by memorisation. Learners left the education system with little or no preparation for the world of work, which requires people who are problem solvers, team workers, creative, good communicators, familiar with current technology developments and can adapt well to change [7].

Over the years the OBE curriculum has been revised and this has resulted in the NCS being the curriculum basis for the school system. The NCS builds its learning outcomes on the Critical-Cross Field Outcomes (CCFO,s) and Developmental Outcomes that were inspired by the constitution of South Africa and developed through a democratic process [4].

NSC for accounting requires that accounting teachers must be suitably qualified and competent. Concerns have been raised by stakeholders in education about under qualified and incompetent teachers. The major challenge faced by accounting teachers is the workload and administrative burden placed on teachers and the limited resources with which they have to carry out their duties [5].

#### 4. Research objective

The objective of this research is to articulate the challenges that high school accounting teachers face in the teaching of accounting that might be considered as the cause for learners not being adequately prepared for accounting courses in higher education institutions.

#### 5. Methodology

The approach to be used is to conduct a literature survey on the school system within which accounting teachers operate, and then conduct interviews with the teachers with the questions based on the literature survey and supplemented with a closed ended questionnaire for biographical data. The research will be conducted in the Mangaung Local Municipality in the Free State Province in South Africa where the research population from which the research sample will be drawn is based.

#### 6. Expected Outcomes

The proposed research is expected to have the following outcomes:

- Bring to the attention of higher education institutions the challenges that accounting teachers face in the teaching of accounting in the schools system, this will in turn enable higher education institutions to give teachers the support that they need in order to produce learners that are adequately prepared for higher education.
- Bring the formation of an association for high school accounting educators to create a network of support amongst accounting teachers that will provide them with knowledge of the latest developments in the field of accounting.

- Have higher education and accounting professional bodies such as the South African Institute of Chartered Accountants (SAICA) as well as employers as key stakeholders in the association for high school accounting teachers.

#### 7. Conclusion

The researcher hopes that this research will bring a positive change and an end to the cycle of blame amongst accounting graduates' employers, higher education institutions and the school system. The positive change that is hoped for is one whereby teachers, higher education institutions and employers work together for the benefit of the learners from school right through to employment in order to ensure that the school system produces learners that are adequately prepared for accounting courses in higher education.

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# Towards a Curriculum of Consciousness: An African and Asian Interface for New Philosophy of Art and Contemporary Cultural Practice, Tested through Action Research

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## Abstract

*"4 Minds" is a trans-disciplinary pedagogic action research project taking place at Glasgow School of Art in affiliation with Goldsmiths College University of London. Seven colleagues are testing Ranjana Thapalyal's thesis which aims to develop self reflective approaches to art and art education, based on a deconstruction and selection of Hindu and Yoruba philosophical theories. Two key problems are identified: firstly the ambivalent position in which Higher Education Art School pedagogy finds itself in the fall out of post modern discourse; secondly the attendant difficulty in overt espousal of skill based or socially and ethically aligned work, in favour of more theoretically engaged but potentially self alienating work.*

*The thesis proposes that these problems be tackled via a conscious harnessing of the critical rigour of post structural logic with the flexible and multidisciplinary nature of two of the world's most ancient thought systems, chosen because of their dynamic concepts of self-knowledge and social context. The danger of a proselytising religious nuancing is pre-empted by highlighting the inferred self questioning nature of the thought systems themselves, and their evident insistence on hermeneutic function and individual human agency, leading to the Curriculum of Consciousness.*

## 1. Introduction

The pedagogic thesis that is being tested through the "4 Minds" project will demonstrate how new self reflective approaches to the study and practice of art and art education can be developed on the basis of analysis, deconstruction and selection of theories from Hindu and Yoruba philosophies. It is premised on the conviction that it is necessary to engage with root philosophies of human thought in order to respond to ethical conundrums arising from the social constructs of some aspects of post structural theory, now deeply embedded in art education and popular culture. Hindu and Yoruba philosophies are particularly suited to this purpose because of their emphasis on human agency and individual responsibility in shaping spiritual and cultural

practice. This outlook has a prescient quality in the light of post structural emphasis on cultural and individual context in the construction of meaning and in the recognition of the central role of language as both signifier and signified in the creation of meaning.

## 2. Literature Review

In developing this thesis, the following key authors have been referred to: Wole Soyinka on Yoruba concepts and cosmogony [1], John Picton on Yoruba aesthetics [2], John Pemberton [3] on Yoruba society and ritual, Kola Abimbola [4] on the role of hermeneutics in Yoruba spiritual practice, and Molaria Ogundipe on African feminism [5]. For Vedanta/ Hinduism the seminal texts of the Upanishads [6] and Bhagavata Gita [7], and commentaries on these by Swami Krishnananda [8]; Kapila Vatsyayan [9] on Indian aesthetics and the essentially interdisciplinary nature of ancient Indian science, medicine, art and philosophy; S. Radhakrishnan [10] on Indian philosophy in general. For post structural comparative elements, recent work paralleling Derrida's theories with Hindu, Buddhist, and classical Western philosophy particularly William S. Haney III [11]; Derrida on deconstruction, supplement, differance, and logocentrism [12] offers major parallels with ancient Indian thought, and by application to Yoruba concepts of time, space and the construction of the self. Postcolonial theory and its critique are employed to unpick the legacies of initial encounters between European academic traditions and Yoruba and Hindu aesthetic fields, i.e. primitivism and orientalism. Edward Said's ideas of "strategic location" and "strategic formation" [13] serve as initial methodological models; also of significance to the thesis Michel Foucault [14] on language, memory and power, Homi Bhabha [15] on the interstitial, Gayatri Spivak on the limits of Post-colonialism [16], and Frederic Jameson's critique of late modernity [17]. In analysing art education as it stands and philosophy of art education, Jagdish Gundara [18] on inter-culturalism, Shaun Gallagher [19] and Dennis Atkinson [20] on hermeneutics in education have been formative. All have informed

the thesis thus far, and will continue to underpin the emergent philosophy of art.

### 3. Analysis of Findings

The overall logic of post structural theory has strengthened recognition of education's crucial role in establishing social plurality and inclusion. Such ideology of course already existed within the discipline of education, as reflected in post World War II British policies of schooling for the working classes, comprehensive schools and later experiments with subject and context as in the incorporation of spoken dialects in literary studies [21]. Yet questions about the validity of ideologies themselves, an inevitable part of post structural theoretical practice, have brought about a struggle within pedagogy, in defining its own purpose and the notion of teacher and taught. Discourses of informed subjectivity, as an alternative to universalism, have allowed art education to embrace a skepticism that usefully dislodges imbalances of power, but at a cost. For this same skepticism, if sweepingly applied, can discourage any declaration of belief, and give cause to a rejection of pedagogy based on the dissemination of skill. In art education, as a result of the decentring of the art object and of the artist as lone 'prophet of truth', socially and politically engaged art too has taken a back seat, often dismissed as too subjective, rhetorical in nature and lacking in reflexivity. A problematic result is articulated by many art students today. Without a curriculum of skills, and the offering in its place, of only intellectual activity in a climate of ideological skepticism, higher art education, particularly in fine art disciplines, stands in danger of making the art school experience one of isolation and existential ennui or even crisis for many students, even as it sets out to value individual experience.

In arguing for the possibility of being a Marxist as well as a postmodern thinker, Fredric Jameson summarises,

*"If what is historically unique about the postmodern is ...acknowledged as sheer heteronomy and emergence of random and unrelated subsystems of all kinds, then, or so the argument runs, there has to be something perverse about the effort to grasp it as a unified system in the first place: the effort is, to say the least, strikingly inconsistent with the spirit of postmodernism itself; perhaps indeed it can be unmasked as an attempt to 'master' or to 'dominate' the postmodern, to reduce and exclude its play of differences, and even to enforce some new conceptual conformity over its pluralistic subjects. Yet, leaving the gender of the verb out of it, we do all want to 'master' history in whatever way turns out to be possible" [22].*

Jameson asserts that an acknowledgment of the plurality of truth does not rule out the usefulness of the bedrock of analytical thinking about History and its control of human destiny found in Marxist literature, and vice versa. In the same vein, it is argued here that the religious and philosophical underpinnings of ancient thought systems too can be harnessed to give direction and insight into the complexity of pluralist readings of society. In order to engage with the two thought systems presented here, however, we have first to excavate the layers of sediment created by colonial history and mono cultural educational systems in our encounters with art and ideas from Africa and Asia. Only when a clearer view is attained, can we proceed to make it relevant to the present moment. For this purpose, the "Curriculum of Consciousness" applies methodologies of postcolonial critique in its encounter with Yoruba and Hindu Vedantist concepts and their synchronicity with post modern theories.

The Yoruba and Hindu principle of self – knowledge, connects to, but goes beyond post structural analysis and negation of absolute truths. The idea, present in both Yoruba and Hindu philosophies, of a greater Consciousness interpreted through mind and actuated through contextually determined ethical consideration, can be synthesised with the non passive, intellectually alert post modern ideal. Such an epistemology would have many applications, and I argue that in today's political climate, the education industry cannot afford to ignore the potential benefits of harnessing the intellectual freedom heralded by postmodernism to a reflexive and distilled understanding of ancient belief systems. Equally, we cannot afford to allow the same intellectual freedom to slide into an isolated individualism, in an age when fear of terrorism and fundamentalism seems to have created flawed but persuasive arguments against attempts at cultural plurality [23]. This is particularly significant in the context of the ecological crisis, and the dynamics of multinational economic manipulations. The kind of multilateral dialogue that is required to deal with complex issues around climate change can hardly be encouraged by the extreme security rhetoric witnessed in the west since the tragedy of the twin towers.

Is it the job of art education to deal with the myriad issues touched on above? Perhaps not directly, but it is the inevitable responsibility of any educational institution to take a stance and gear itself towards the eventual social function of its alumni. It is suggested here that art and art education can be at the heart of positive, inclusive social and political change, working from structures that facilitate philosophical self- examination and strengthen the individual's inner resources. For all these purposes, Yoruba and Vedantic thought provide practical and

theoretical starting points, and when viewed with the lens of post structural understandings of knowledge and power, they can be drawn from without the attendant dangers of wholesale anachronistic appropriation.

The core theoretical/ philosophical content of “4 Minds” comes from my personal research, which has been ongoing since 1997. It is structured around a lecture series called “Shades: Yoruba and Ancient Indian Ideas on Space, Creativity and Self” now running for the seventh year in the Department of Historical and Critical Studies at Glasgow School of Art. On this course students are offered a choice of approach to the assignment questions, which can be examined via an academic essay, or via a studio based discipline specific response. This year, colleagues from studio departments have been engaging with the course content themselves since June 2009. In term II of academic year 2009-10 these colleagues, Ken Mitchell and Sue Brind from Fine Art, Moira Dancer from Visual Communication, Jake McKinney from Fine Art Photography, Audrey Evinou from Academic Language Support, Eileen Reid from Widening Access, and Lyn McLaughlin from Education Technology will both facilitate and encourage students’ studio based response to the lectures. The project thus serves as an enabler for philosophical enquiry into learning and teaching for students and staff, as well as a data collection method for the doctoral thesis I am preparing at Goldsmiths College University of London in the Education Studies department.

A fascinating outcome has been the ongoing exchange of a set of ideas between the members of the research team, out with Yoruba and Vedantic concepts. Triggered by the general question, would the introduction of philosophical self enquiry and consideration of spiritual practice enrich the learning and teaching experience at art school, the philosophical and spiritual inclinations of several of the team have emerged. As a result a parallel programme has developed in which the team is considering the potential for educational context of these other philosophical ideas too. Those who have introduced them are examining, firstly the question of why they have not as yet directly referred to these in their teaching; secondly how these ideas are actively employed in their own self sustenance as teachers, if not as curriculum inputs, and thirdly how they might now consider the relevance of specific aspects of their chosen philosophical outlooks in their teaching practice. Equally, those in the team whose focus is scientific, psychoanalytical, or based purely on avowedly secular education theory, are reflecting on and defining their own outlooks as applied to their pedagogic practice, and how this may be enriched by the interactions of the project.

For the purposes of transferability and to act as catalyst for individual tutor/student development,

Yoruba and Hindu Vedantist ideas of the Self have been distilled into one easily grasped concept shared by both traditions. This is the perception that the human mind has four levels of consciousness. All four levels are required for Action to be determined and take place. In both traditions social structures are emplaced to ensure ethical judgement in determining Action. Frequently these social structures are encoded in, and expressed through religious precepts and customs. Crucially, there is in both traditions also a realisation that social structures and moral judgements can become ossified and counterproductive, so the role of the individual Will is paramount. In conjunction with the other three levels of mind consciousness, the Will is required to be in a constant state of alertness. And unlike the Schopenhuerian Will, has recourse to logic and structure in order to actuate itself.

In the Hindu Vedantist tradition, the four levels of mind consciousness [24] are:

**MANAS** mind/ intellect

**BUDDHI** knowledge

**CHITTA** heart/ conditioned consciousness

**AHAMKAR** ego

Action, or *karma*, is the end result ideally of a balance of all four levels of consciousness, applied to a specific situation at a particular time. Action/ *karma* can in this sense be seen as the Will itself—a vehicle of expression of the force which emerges when mind is actuated. For the purposes of this thesis, the Will is also identified with the Vedantic concept of the *jiva atman*. This refers to an individuated soul, Atman in essence, but transferring from life to life until it is able to shake off the cycle of rebirth [25]. The concepts of *Bhraman/Consciousness* or *Atman, jiva atma* and *karma* are all discussed in the Bagavada Gita (c. 400 BCE). Its text along with the Upanishads which precede it (c. 600 BCE) are primary references for Hindu theory in this research [26].

In the Yoruba tradition, the four levels of mind consciousness are,

**ARA** the corporeal body- skeleton, flesh, organs.

The Ara can be said to be the most accessible self. It is created by the deities *Ogun* and *Obatala* and is distinct from the “soul complex” [27] which is envisaged as consisting of,

**EMI** the breath, imparted by the Supreme Being *Olodumare*.

**ORI** the “principle of material actualisation” [28]

The Ori is frequently referred to as the “inner head” and also defined as an individual’s personal deity.

**CSE** the “principle of individual effort, strife or struggle (necessary) before the potentialities encapsulated in one’s Ori can be actualised” [29].

Action in this conceptualisation of mind is the end result of the influence of Emi, Ori and Cse on the Ara. As in the Vedantist tradition, the Will can be

seen as an expression of the four levels of mind consciousness, for it is the Will that expresses the application of the four minds to a specific situation at a particular moment in time.

#### 4. Contribution to Knowledge

The thesis will contribute a transferrable distilled understanding of Vedantic and Yoruba thought as applicable to a dynamic, context specific philosophy of art and education methodology. Additionally, it will enable the application of philosophical self reflection in general to art school pedagogy, and both challenge and offer an alternative to current modes of practice.

One of its central premises is that the ability to determine appropriate action, nurturing personal as well as social good, can be inculcated through art education. Indeed in the ancient traditions discussed, self realisation is entwined with the very purpose of art. Translated into twenty-first century context, their visual and contemplative methodologies are highly applicable to current questions about the role, remit and meaning of art. Both traditions employ a complex layering of linguistic and visual metaphors which can be read at different levels depending on the context of its production and that of the onlooker. In that sense, traditional Yoruba and Hindu art can be approached in much the same way as an art student today would be asked to approach a contemporary piece of art. The all important distinction, between current norms for reading art as presented in art school pedagogy, and the one proposed here, lies in the nuancing of the question, WHO is looking at this art work and asking these questions? As well as the social and political gaze of the onlooker, what is proposed here is a metaphysical and contemplative one.

The postmodern position in art education emphasises an awareness of the positionality of the onlooker, a critically aware engagement with the temporal nature of meaning in art and art manufacture. Frequently cited sources for such approaches are Barthe's exhortation to engage in writerly reading [30], and Derrida's preoccupation with language as metaphor and meaning as subjective presence [31]. Thus today's art student, particularly the fine art student, is expected to eschew the modernist separation of art and art practice from its social context, and to recognise, if not assert, context as part of art's meaning.

From a postcolonial perspective, the paradigm described above remains flawed unless accompanied by rigorous historical and social study. While it can be argued that a general application of post structural values would pre-empt hasty judgements, the attendant distrust of faith /belief systems and political allegiances often precludes a thorough examination of many crucial factors that shape

traditional art. This is particularly true of art objects from African and Asian traditions, especially when viewed in western, or westernized pedagogic systems. It is impossible for example to view an early Cubist painting without encountering the discourse of Primitivism. In the text of traditional Modernism, the only important aspect of the African, Oceanic, Asian and South Asian artefacts that fuelled Cubism is their influence on European Art. In setting out to unravel the meanings and intentions of those art objects today, it is both necessary and possible to engage with the conceptual systems which brought them into being. Thus an encounter occurs with a notion of religion/society/ philosophy / science that is at odds with the firmest of rationalist western traditions, as well as with the anti positivist stance of post structuralist theories. In critiquing mainstream modern art's *omissions* in researching the meanings of these objects, too, one encounters a fundamental nexus between culture and power, and of great significance to this thesis, a fundamental dismissal of the orality, multidisciplinary and playfulness with social hierarchy that underpins the works.

An example of the Yoruba awareness of the multiple purposes of ritual and worship, and their principally social function, is the use of popular festivals to draw attention to the responsibilities of having power within the community and to problematise the cosmic associations of royal power. Within the ritual associated with the Festival of *Ogun*, a mock battle takes place between titled chiefs and the *Oba* or king, represented by his palace servants. The enacted skirmish ensues after repeated invitations from the *Oba* to the chiefs to enter the palace verandah have been first ignored, then reluctantly accepted. This "*ritual affront*" to the *Oba* is explained by John Pemberton as a dramatic reminder to the king that the "*the people over whom he reigns have another allegiance, another locus of political identity than that which is expressed in his royal person. This is the primordial bond of kinship*" [32].

#### 5. Conclusion

Why should we continue to ignore the deeper cultural language of this art and the traditions from which it stems, now that so much more information is accessible? And how does one learn to read such work afresh? A pedagogic model that embraces post colonial critique would necessitate an analysis of the social, political, cultural identity of the researcher and his/her institution, as well as that of textual authors on whom the research is based. In such a process, a question of moral responsibility in understanding and interpreting human nature begins to filter in. The pedagogic model proposed in this thesis, however, would require a further elaboration on the position/context of the viewer or reader of the

art work. By including in the research an unravelling of current cultural tropes created by misunderstandings of the object, the ground is cleared for fresh engagement. By including its philosophical, religious, and moral encoding, the researcher is given the opportunity to place him/herself in the same existential arenas.

The exercise of looking at art would then become an exercise in understanding one's own philosophical nature. Potentially such an approach could become an exercise in developing a stronger sense of individuality based on recognition of the individuality of others, as well as connections with them as fellow human beings. When faced with the multiple realities and metachronistic concepts of Yoruba and Hindu Vedantist thought, the question, "Who am I?" in the contemplative sense is but a step away. In employing the inherently phenomenological and hermeneutic implications of both traditions, an art of self knowledge as well as creative output can ensue.

## 6. Future Work

It is anticipated that the essays, art and design pieces that emerge from the taught course and the "4 Minds" project will be displayed in an exhibition that will itself serve as a point of recollection and exchange of ideas some time after the course has ended, so that a physical and virtual meeting place allows for reflection on how, or whether the concepts introduced have developed in students' minds. A Virtual Learning Environment internal to Glasgow School of Art has served as communication hub as well as an archive for recorded course lectures, filmed visiting speakers, discussion boards and surveys. This material will naturally be collated and analysed for the thesis, but the team will also consider how appropriate sections may be permanently archived, possibly as a catalyst for pedagogic debate in Higher Education Certificate programmes.

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# A Study on the Effects of Teacher Attitudes on Children's Beliefs about Science

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## Abstract

*This study is carried out to investigate whether preschool teachers' attitudes toward science have an effect on children's beliefs about science. The sample of the study is composed of 35 preschool teachers and 525 six-year-old children in the classrooms of these teachers. For the purpose of the study, Early Childhood Teachers' Attitudes toward Science Teaching Scale was used to measure teachers' attitudes toward science teaching, and Puppet Interview Scales of Competence in and Enjoyment of Science (PISCES) were used to evaluate children's beliefs about science. The analysis of the data obtained shows that teachers display a high- or medium-level attitude toward science and that these attitudes are negatively correlated with children's beliefs about science.*

## 1. Introduction

In preschool age, the foundations of children's knowledge and skills are laid, children begin to observe to find an answer to their questions about objects and events and they develop first science-related concepts [1,2]. That is why many scholars believe that science education should start at preschool age [17]. Processes such as making observations, interpreting and classifying information, anticipating, correlating and measuring are developed by science. Preschool children begin to develop and use most of these competences when they become a part of the physical world, and discover and organize schematically essential qualities of objects. This interaction of children with the natural environment constitutes their first science-related experience and their interest in scientific themes continues throughout their life according to their level of development. Therefore, in order to follow a satisfactory process, it is of importance to provide science education properly in consideration of developmental level of children. The main responsibility for this falls to teachers. Teachers are required to be aware of the importance of science education and to devise appropriate programs to

support science development of children. Martin defines as follows the competencies that teachers require to provide science education at preschool: (1) to comprehend the nature of scientific research and to know how to use scientific processes and skills; (2) to understand basic concepts and facts in science; (3) to establish a conceptual relationship among disciplines of science (i.e. physics, chemistry, biology) as well as the relationship of scientific disciplines with mathematics, technology and other disciplines; and (4) to use scientific research and skills in handling personal and social problems [1].

Furthermore, significant responsibilities fall on teachers to bring children closer to science and develop children's attitudes toward science in preschool age [2]. Thus, preschool teachers assume an active and important role in children's science-related academic life in the future. Preschool teachers' attitude toward science is regarded as a significant factor to provide an effective science education [13,14,15]. The literature suggests that preschool teachers' attitude toward science influences not only to which extent children understand science but also children's opinions about science and the effectiveness of classroom activities [4,5,6].

## 2. Method

In this study carried out to investigate whether preschool teachers' attitudes towards science have an impact on children's beliefs about science, the sample consists of 35 preschool teachers – 23 working at public school and the remaining 22 at private schools, and a total of 525 children – 264 female and 261 male - in the classrooms of these teachers. The teachers in the sample have been studying as a preschool teacher for (%8.6) 1-3 years; (%22.9) 4-6 years; (%11.4) 7-9 years; (%14.3) 10-12 years; (%8.6) 13-15 years; (%8.6) 16-18 years; (%11.4) 19-21 years; (%5.7) 22-24 years and (%8.6) 25 years and up.

For the purpose of the study, Early Childhood Teachers' Attitudes toward Science Teaching

Scale, developed by Hyung-Sook-Cho et al. and adapted into Turkish by Unal, Akman and Gelbal, was used to measure teachers' attitudes toward science teaching; and Puppet Interview Scales of Competence in and Enjoyment of Science (PISCES), developed by Mantzicopoulos and Patrick, were used to evaluate children's beliefs about science [4,8,18].

## 2.1. Instruments

**2.1.1. Early childhood teachers' attitudes towards science teaching scale.** Early Childhood Teachers' Attitudes towards Science Teaching Scale shows which attitudes teachers adopt toward science teaching. The original form developed by Hyung-Sook-Cho et al. is a 22-item likert-type scale consisting of four subtests [4]. The subtests of the scale are the categories of comfort-discomfort, classroom preparation, managing hands-on science and developmental appropriateness. As a result of the factor analysis, made for the adaptation of the scale into Turkish, some items were eliminated. The scale in Turkish finally consists of 13 articles and two dimensions.

As the content and meanings of the items categorized under the first dimension are related with what teachers do to develop oneself in science teaching, this dimension was named as "self-development". The content and meanings of the items categorized under the second dimension have to do with self-efficacy of teachers, and thus this dimension was named as "self-efficacy". The internal consistency coefficient (Cronbach Alpha) of Dimension I is .82 and Dimension II is .73.

**2.1.2. Puppet Interview Scales of Competence in and Enjoyment of Science (PISCES).** PISCES, used to evaluate children's belief about science is composed of 4 sub-dimensions, i.e. General Science Competence, Specific Science Knowledge and Skills, Science Liking and Ease of Science Learning, and 63 items. The Scale has currently been adapted into Turkish by Akman et al. For the purpose of adaptation, the original scale form was translated into Turkish first by the researchers and then by three faculty staff who are experts in the field and have good command of English. The Turkish and English forms of the scale have been applied to 40 fourth-year students in the Department of English Language Teaching. Between the two applications were two weeks. The correlation coefficient (n=40) between the scores obtained from the first application was found as  $r = .83$   $p < .001$  for the whole scale. The scale, which has still been adapted to Turkish, ended up with 7 sub-dimensions as a result of the factor analysis. In line with the content of these items grouped under 7 factors and with the opinions of experts, the sub-dimensions are named as follows: I. interest in science, II. self-confidence, III. scientific

curiosity, IV. life science, V. reading, VI. scientific competence and VII. reading and writing. The reliability coefficient of the scale was = .89. The questions in the 5<sup>th</sup> and 7<sup>th</sup> dimensions of the scale are directly related with reading and writing. In our country, there are preparations for reading and writing in preschool education; however, there are no activities to directly teach reading and writing. Therefore, in line with expert opinions, these items were excluded from the scale for preschool children. Pearson correlation analysis and t test were used for the statistical analysis of the data.

## 3. Findings

As a result of statistical analysis of this research findings obtained are shown in Table1-3.

**Table 1. The correlation analysis between teachers' attitudes toward science teaching and children's beliefs (n=525)**

D	C	ATS	IS	SCO	SCU	LS	SC
ATS	r	1	-.147(**)	-.143(**)	-.190(**)	-.196(**)	-.142(**)
	p		.001	.001	.000	.000	.001
IS	r	-.147(**)	1	.585(**)	.568(**)	.605(**)	.444(**)
	p	.001		.000	.000	.000	.000
SCO	r	-.143(**)	.585(**)	1	.465(**)	.519(**)	.568(**)
	p	.001	.000		.000	.000	.000
SCU	r	-.190(**)	.568(**)	.465(**)	1	.596(**)	.346(**)
	p	.000	.000	.000		.000	.000
LS	r	-.196(**)	.605(**)	.519(**)	.596(**)	1	.367(**)
	p	.000	.000	.000	.000		.000
SC	r	-.142(**)	.444(**)	.568(**)	.346(**)	.367(**)	1
	p	.001	.000	.000	.000	.000	

\*\*Correlation is significant at the 0.01 level (2-tailed).

(D:Dimensions, ATS:Teacher Attitude Score, IS: Interest in science, SCO: Self confidence, SCU: Scientific curiosity, LS:Lifescience, SC:Scientific competence)

**Table 2. The correlation analysis between the dimension of developmental appropriateness in teachers' attitude scale and children's beliefs (n=525)**

D	C	DAS	SCO	SCU	LS	SC	IS
DAS	r	.000	-.136(**)	-.110(*)	-.129(**)	-.144(**)	-.268(**)
	p	1	.002	.012	.003	.009	.000
SCO	r	-.136(**)	1	.465(**)	.519(**)	.568(**)	.585(**)
	p	.002		.000	.000	.000	.000
SCU	r	-.110(*)	.465(**)	1	.596(**)	.346(**)	.568(**)
	p	.012	.000		.000	.000	.000
LS	r	-.129(**)	.519(**)	.596(**)	1	.367(**)	.605(**)
	p	.003	.000	.000		.000	.000
SC	r	-.114(**)	.568(**)	.346(**)	.367(**)	1	.444(**)
	p	.009	.000	.000	.000		.000
IS	r	-.268(**)	.585(**)	.568(**)	.605(**)	.444(**)	1
	p	.000	.000	.000	.000	.000	

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed). (D: Dimensions DAS: Developmental Appropriateness Score SCO: Self confidence SCU: Scientific curiosity LS: Life science SC: Scientific competence IS: Interest in science )

The Table 1 shows that, according to Pearson correlation analysis result, there is a significant negative correlation between teachers' attitude scores and children's beliefs about science in five sub-dimensions.

The Table 2 illustrates the results concerning the scores of dimension of developmental appropriateness in teachers' attitude scale and children's beliefs about science, demonstrate that, according to Pearson correlation analysis result, there is a significant negative correlation between teachers' developmental appropriateness and children's beliefs.

**Table 3. The correlation analysis between the dimension of self-efficacy in teachers' attitude scale and children's beliefs (n=525)**

D	C	SES	SCO	SCU	LS	SC	IS
SES	r	1	-,303(**)	-,128(**)	-,135(**)	-,217(**)	-,236(**)
	p		,000	,003	,002	,000	,000
SCO	r	-,303(**)	1	,465(**)	,519(**)	,568(**)	,585(**)
	p	,000		,000	,000	,000	,000
SCU	r	-,128(**)	,465(**)	1	,596(**)	,346(**)	,568(**)
	p	,003	,000		,000	,000	,000
LS	r	-,135(**)	,519(**)	,596(**)	1	,367(**)	,605(**)
	p	,002	,000	,000		,000	,000
SC	r	-,217(**)	,568(**)	,346(**)	,367(**)	1	,444(**)
	p	,000	,000	,000	,000		,000
IS	r	-,236(**)	,585(**)	,568(**)	,605(**)	,444(**)	1
	p	,000	,000	,000	,000	,000	

\*\* Correlation is significant at the 0.01 level (2-tailed).

(D: Dimensions SES: Self Efficacy Score SCO: Self confidence SCU: Scientific curiosity LS: Life science SC: Scientific competence IS: Interest in science)

The Table 3 shows that, according to Pearson correlation analysis result, there is a significant negative correlation between teachers' self-efficacy scores and children's beliefs about science in five sub-dimensions.

#### 4. Discussion

Teachers' attitude toward science is one of the most important factors in an effective science teaching [4,13,15]. For, their attitudes play a significant role in the development of preschool children's attitudes toward science. However, many teachers mention that teaching science takes more time than teaching other fields. This belief of teachers is based on their misconceptions that science is a field which requires complex materials and which can only be taught by experts [19]. Davies and Howe suggest that teachers' attitude towards science is shaped by their educational experience and that teachers with negative attitudes not only transfer these attitudes to children but also make them acquire inadequate or inaccurate knowledge [2]. This study shows a negative but significant correlation between teachers' attitudes toward science and children's beliefs about science (Table 1, 2 and 3). It is surprising to find in this study that there are no

teachers who have a low level of attitude and most teachers display medium- or high-level attitude toward science, however that their attitudes have opposite but significant relationship with the beliefs about science of the children in their classroom. The study has also demonstrated that the gender of children and the type of school where teachers work do not have an impact on attitudes and beliefs.

The main components of science are content, process and attitude. Making an activity in science is an approach. This approach is a process which involves research, application and discussion [7]. Achieving the goals of preschool education is closely related with teachers' personality, knowledge about instruction techniques and attitude toward the application of preferences. Therefore, children set out to new learning and discovery processes when teachers support scientific activities which start with curiosity of children with such positive attitudes as encouragement and help.

In our country, the preschool education programme, revised in 2006 by the Directorate-General for Preschool Education of the Ministry of National Education, comprises goals and gains related with science education, but in practice, it is observed that teachers make use of scientific activities less frequently. According to Avci, preschool education institutions do not give the required importance to science activities, and teachers lack sufficient knowledge and skills about the goals of science education and the methods and techniques used in teaching science [9]. Similarly, Tu and Hsiao carried out a study with 20 preschool teachers, where they found that the teachers used such science activities as counting and measuring in blocks and playgrounds and cause and effect questions in dramas [12]. Furthermore, most of the teachers used activities which were not related with science and took less advantage of science-related activities made in water table and sandpit. As mentioned by Kallery and Psillos, the development of preschool children's knowledge and skills on science is closely related with the development of teachers' skills and attitudes [11]. Other research findings with respect to teachers' attitudes also show that the practices in real life do not overlap the activities in the curriculum [20]. The research by Ayvaci et al. indicated that teachers lacked methodological knowledge [10].

Preschool teachers are expected to have sufficient knowledge on various fields (physics, chemistry, biology) within the complex structure of science, given the importance of science in early childhood age [17]. Children require acquiring not only accurate knowledge but also positive attitude toward science. Accordingly, teachers' attitude

toward science has an impact on students' performance and attitudes

Children learn at school to like or not to like science. If students acquire successful experiences and positive feelings when they just start scientific activities, their future science-related experiences will be successful. This will enable them to gain positive attitudes toward science, and thus to show interest in science throughout their life and to enjoy learning science. However, provided that students do not receive sufficient support from their teachers and have negative experiences when they start science courses, they will mostly avoid science during the rest of their lives [13]. Thus, they will acquire inadequate knowledge and develop negative attitude toward science [16].

The findings of this study demonstrate that teachers' positive attitude toward science does not have positive impacts on children. The negatively significant correlation between the two groups indicates that teachers are required to reflect their relatively positive attitude on children.

## 5. Conclusion and Recommendations

The main components of science are content, process and attitude. Making an activity in science is an approach. This approach is a process which involves research, application and discussion [7]. Achieving the goals of preschool education is closely related with teachers' personality, knowledge about instruction techniques and attitude toward the application of preferences. Therefore, children set out to new learning and discovery processes when teachers support scientific activities which start with curiosity of children with such positive attitudes as encouragement and help. The educational activities in preschool education programmes are required not only to equip children with knowledge but also encourage them to research, examine and experiment. For, scientific activities of quality help children develop critical thinking, draw more careful conclusions and be more competent in problem solving and decision making.

What is important in preschool age is to develop children's research, examination and observation skills and thus to lay the ground for scientific thinking. The role of teachers is to add new knowledge as children's capacity enhances and to support them. Thus, children can transfer to their future life the positive attitudes they acquire in early childhood.

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## **Session 21: Cross-disciplinary Areas of Education**

The Impact of Globalization on Arts Education in American Public Schools  
(Calvin W. Walton, Greg Wiggan)

Developing a Paradigm to Describe Diversity and Multi-culturalism in Modern America  
(Mary Beth Leidman, Bradley Wiggins)

“Being There”: Can the Presence of the Student during the Assessment Process Help in Their Learning?  
(Julian Rennie)

Living Experience: Seeing the Connections in Indigenous Knowledges, Environmental Education and Theatre in Ontario  
(Julia Lane)

Life Self-fulfillment of a Human Being from the Point of Systemic Anthropological Psychology: New Glimpse on Development of Human Resources  
(Irina Olegovna Loginova)

# The Impact of Globalization on Arts Education in American Public Schools

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## Abstract

*This paper examines how economic globalization has led to the creation of a national education policy that systematically reduces student access to instruction and meaningful experiences in the arts. The No Child Left Behind Act is theoretically designed to create a workforce that will enable the United States to reclaim global economic dominance. Through its requirement of comprehensive assessment in reading, math, and the sciences, NCLB has effectively led American public schools to reduce arts instruction opportunities. Findings reveal that there is a strong positive correlation between access to arts instruction, cognitive development, and student achievement. This study is significant because it has implications for the systematic expansion of arts education opportunities within the K-12 curriculum.*

## 1. Introduction

The curriculum that is provided for students in American public schools is largely controlled and determined by national and state governmental organizations. These institutions decide what students will learn and do based on their determination of the economic, social, and political needs of the state at a given juncture in history. In our contemporary era of economic globalization, the state apparatus has engaged in a coordinated movement to develop a core curriculum that is designed to create and maintain a workforce that is capable of performing job functions that support our modern service and technologically based economy. The focal point of the effort to align school curriculum and academic standards with the economic needs of the state resulted in the passage of the No Child Left Behind Act of 2001 [26], the law that provides the foundation for contemporary education policy in America, and serves as the nation's educational response to globalization.

No Child Left Behind, commonly referred to as NCLB, has had a significant impact upon the curriculum offered in American public schools because it places a much greater emphasis on the basic skills areas of reading and mathematics. This shift in the academic locus has influenced school districts throughout the country to sententiously

reduce the amount of time students spend on other subjects. This reduction in academic diversity is known as curriculum narrowing, and has had an especially negative impact on arts education. Over the last 20 years, many states have cited significant reductions in formalized arts education opportunities in their public schools. One-quarter of public school principals surveyed in Illinois, Maryland, New Mexico, and New York reported decreases in instructional time for the arts, and the proportion of principals reporting such decreases in high-minority schools, at 36 percent, was even greater. According to a report on music in California public schools, the proportion of students taking music classes fell from 18.5 percent in 1999 to 9.3 percent in 2004—a 50 percent decline. In the same period, the number of music teachers in the state declined by nearly 27 percent, representing an actual loss of 1,053 teachers [25]. Among school districts that reported a decrease in instructional time since 2001-2002, 23 percent reported decreasing total instructional time for arts and music by 50 percent or more below pre-NCLB levels [2]. For districts with at least one school identified for NCLB improvement, the average number of minutes per week devoted to art and music is fewest of all subject areas studied, with 97 minutes of arts compared to 568 for reading. Further evidence of the steady decline of arts education opportunities is demonstrated by the fact that 30 percent of districts with schools with students identified as most responsive to the benefits of the arts, have decreased instructional time for art and music.

Concerns over the systemic exclusion of arts education opportunities for students in American public schools is not based on generalized concerns over limiting access to courses and activities that provide children with more diverse and enjoyable learning experiences. The reduction of formal, structured arts learning opportunities has a profoundly negative impact on the cognitive development and academic achievement of students. The root causes, and subsequent effects, of the denial of arts education opportunities for students warrant thorough examination.

This research paper will utilize critical education theory as a framework for analyzing No Child Left Behind, a national education policy whose implementation represents a coordinated effort to

limit arts education learning opportunities for students in American public schools. In theory, No Child Left Behind is a law that is designed to develop students who will serve as a readily prepared workforce for American corporations, which will provide the manpower that will enable the United States to reestablish itself as the dominant nation within a global capitalist economic environment. Through its requirement of comprehensive instruction and assessment in reading and math, NCLB encapsulates an implicitly coordinated effort to reduce arts education opportunities for students in American public schools in general, and more specifically for minority students, students who attend urban schools, and students in underserved populations. This discussion will include an examination of the manner in which hegemonic state control influences student access to arts education. In addition, this inquiry will address the question of how the exclusion of arts education programs negatively affects student achievement and, as a result, serves to maintain social inequities. Finally, this inquiry will investigate the ways in which individuals, groups, and organizations have applied the concept of agency to level the academic playing field by challenging school districts and other state education organizations to provide arts education opportunities for students in underserved populations.

This inquiry includes a review of the literature that is related to this topic, which will examine some of the major ideas that comprise critical education theory. In addition, the review of the literature will contain information on a variety of research studies that demonstrate the connection between arts education opportunities, cognitive development, and academic achievement. This paper will also include an examination of the status of arts education opportunities for urban students, and will conclude with an analysis of the work individuals and groups are engaging in to expand arts education opportunities for all students.

## 2. Literature Review

Critical theory is a socio-political theory developed in Germany in the 1930s in response to the rise of Fascism. This theoretical framework is most closely associated with The Frankfurt School, which refers to a group of social theorists who worked out of the Institute for Social Research, which was affiliated with the University of Frankfurt. It sought to explain the failure of Marxism to bring about a social revolution. It challenges received notions of reality and seeks to demonstrate the ways in which our conceptions are socially constructed. Critical theory is reflexive. It is aware that the “reality” we experience “out there” does not exist independently of ideology, but that

reality, along with our perceptions of it, are shaped by hegemony, or the process by which the world view of the dominant state maintains control through the socializing activities of institutions [7]. The institutions that are used to exercise hegemony include the media, churches, the political system, corporations, and schools. Within the framework of critical theory, ideals, beliefs, values, and realities are viewed through a socio-economic contextual lens in an effort to address the question “who stands to gain from society seeing things this way?”. It is then employed to examine the ways in which those who benefit from the system, the power-elites, have designed the system to work in their own favor at the expense of those who do not share in their power and influence.

Critical theorists fully acknowledge the power and influence of institutions to exert hegemonic control over people, but they also posit that people are active participants in institutions, and possess the power, intellect and creative energy necessary to employ human agency, or the ability to mount active and effective resistance to oppression and exploitation, and ultimately work to transform society.

In addition to its foundational analytical basis in Marxism, critical theory also borrows from micro analyses of social phenomena. Critical theorists make use of symbolic interactionism and phenomenology, which are both frameworks that are directly associated with interpretive theory. Symbolic interactionists take the position that people use symbols to communicate meaning. These symbols can be represented through words, gestures, artifacts, signs, or concepts that represent something else. Phenomenologists, on the other hand, examine the social meaning of knowledge, and analyze what it means to be in possession of various kinds of knowledge [7]. Critical theorists incorporate phenomenology and symbolic interactionism in their belief that the notion that social reality is constructed and operates at multiple meaning levels, and through their consideration that understanding of meaning and knowledge can be sources of inequality, based on their inequitable distribution by race, class, and gender.

The term critical theory was initially coined and applied by Max Horkheimer, who served as the director of the Frankfurt School for 17 years. This term was used to contrast the work done at the Frankfurt School with the more traditional framework of positivism, which attempted to conduct analyses of social phenomena through an approach that mimicked the scientific method. As a general framework, one of critical theory’s most important figures was Antonio Gramsci. He used the term hegemony to demonstrate the manner in which the dominant state uses institutions to maintain social control over its citizenry. He acknowledged the



power of the state, but harbored a deeply held belief that, if organized and effectively activated by conscientized intellectuals [16]. He saw the development of, and contributions of this intellectual body as key to the development of an organized effort to exercise praxis, or progressive social change. "Critical self-consciousness means, historically and politically, the creation of elite of intellectuals. A human mass does not 'distinguish' itself, does not become independent in its own right without, in the widest sense, organizing itself; and there is no organization without intellectuals, that is without organizers and leaders, in other words, without the theoretical aspect of the theory-praxis nexus being distinguished concretely by the existence of a group of people "specialized" in conceptual and philosophical elaboration of ideas [16].

Evolved from critical theory, critical education theory examines the manner in which political ideology and economic identity shape education as a means of establishing and maintaining privilege and social control. This social education framework maintains that education is heavily influenced by ideals and beliefs that are directly derived from capitalism, and that its primary purpose is to recreate, or reproduce these conditions in ways that benefit those individuals who are already members of the power-elites. Critical education theorists advance the idea that education can serve as a means for social transformation, and a conduit for obtaining social, cultural, and economic equity. Originally, critical education theory provided a critique that was based on a largely Marxist perspective, but over time, has incorporated ideas and tenets from cultural studies, psychology, economics, and sociology.

Critical theorists view the functions of schooling through the lens of reproduction theory to explain how schools stratify educational opportunities. Like conflict theorists, critical theorists see schools as institutions that reproduce the ideologies of the most dominant social groups and maintain the stratification of the class structure. In more direct terms, schools serve as institutional implements that help white middle and upper class groups maintain wealth and power. Critical theorists employ three models for explaining the manner in which schools maintain inequality and preserve class distinctions-economic reproduction, cultural reproduction, and hegemonic state reproduction.

The first model, economic reproduction, places responsibility for socioeconomic inequality on the schools [6], and connect the failure of schools to significantly reduce poverty and inequality on the capitalist economic structure of society [8]. According to this viewpoint, power belongs to those who control the wealth and capital, and use their considerable influence to preserve inequalities along class, ethnic, and gender lines. This social

stratification leaves blacks, Latinos, women, and native Americans, and other minorities at a distinct disadvantage. Schools exacerbate class differences by using the testing and sorting process to place students into career tracks based on their class, cultural, ethnic and gender backgrounds. Traditionally, students from middle and upper class backgrounds are viewed as having more natural ability, and are placed on academic tracks that lead directly to college and to professional careers. Conversely, lower class students and students from minority groups are considered less able and placed in standardized and vocational academic tracks which lead towards vocational careers and occupational tracks aligned with lower socioeconomic status.

Economic reproduction is also played out through correspondence, or the manner in which society's economic patterns of organization are replicated in its most vital social institutions. For example, if schools are set up like factories, that is because the factory is the most prominent form of economic organization in an industrial society. For critical theorists who ascribe to the concept of correspondence, there is a direct correlation between the way in which youth are socialized in schools, and the aptitudes, attitudes, and behaviors they will need to participate in the workplace.

In addition to the more overt and blatant examples of economic reproduction in schools, correspondence also refers to the more subtle ways in which schools mirror and perpetuate societal inequalities. An example of this is the hidden curriculum [18], a term which describes the implicit messages that are used to convey attitudes, values, behaviors and beliefs that children will need to have in the labor market. The hidden curriculum delivers different messages to students based on their social class, race, and gender. Lower class, working class, and minority children are placed under tighter restrictions and expected to be compliant, on time, and to accept authority, while children from middle and upper class backgrounds are socialized to be independent, authoritative and to assume responsibility.

The second model, cultural reproduction, transcends the transmission of the class structure, and delves into the ways in which class-based differences are manifested within the content of the curriculum, as well as the linguistic and cultural practices that are ensconced in the standardized curriculum. The curricular content glorifies and legitimizes the contributions of white, middle and upper class males, while minimizing the experiences and contributions of members of non-white ethnic groups, minorities, women, and working class and poor whites.

Cultural reproduction is played out in schools through the ways in which language is used and manipulated. The elaborated or universalistic

language patterns of the white middle class predominate in schools [3]. Middle class children are better prepared to participate in the socialization process that takes place in schools because the language patterns they use at home and in their communities mirrors, or approximates that which is used in the formal school setting. The unique and culturally specific language patterns used by African Americans and Latinos, and the straight-forward linguistic patterns of working class and poor whites makes it difficult for students who belong to these populations to understand what is expected of them. As a result they often respond inappropriately, and perform poorly. Their poor performance also leads them towards vocational, blue collar, or service-based occupations, where as their middle and upper class counterparts are tracked towards skilled and professional employment.

The idea of cultural capital is an expansion on Bernstein's idea of linguistic codes. Cultural capital refers to the language, social roles, general cultural background, knowledge, and skills that are passed on from one generation to the next [5]. Cultural capital is not static; it varies according to race, ethnicity, class and gender. High culture, or the music, arts, literature, language, communications and interaction styles of middle and upper class whites, is more highly valued. This kind of cultural capital serves as the foundation of the formal and hidden curriculum in schools. This provides white middle and upper class students with a built-in readiness that is derived from the socialization they receive in the home prior to and during their entry into formalized schooling. The power and influence of cultural capital is most sharply experienced by children during the first years of schooling. This is a time when their comprehension and use of language represents a major component of their teachers' assessment of their ability. Students who respond to questions in single words or short phrases are considered less intelligent than kids who respond in complete sentences. In addition, students who use dialects of standard American English, like Black English, Native American English, and Appalachian English are also judged as less capable. Conversely, students whose cultural and linguistic facility approximates school expectations are considered more academically advanced. Schools support the strengths middle class children already possess, and since academic success is generally linked to job success later on, this relationship between cultural capital, academic success, and professional success serves to reinforce the existing social structure.

Hegemonic State Reproduction represents the third model of reproduction, and it refers to the role the government plays in planning and controlling the education students receive. The term hegemony refers to the social consensus created by dominant groups who control the socializing institutions such

as the media, schools, churches, and the political system; these institutions prevent alternative views from gaining an audience or establishing legitimacy [23]. Schools help create hegemony because, in many ways, they reflect the ideology of the state institutions that regulate public education.

The state exerts hegemonic control over education in two ways: through control over the production of knowledge, and by the manner in which it regulates education. Production of knowledge refers to the way in which the interests of the political party in power influences government research, and impacts decisions concerning what gets taught in the classroom. Regulation of education concerns political influence over education laws, teacher regulation, curriculum mandates, and assessment practices. The No Child Left Behind Act encapsulates both types of hegemonic state control over education. To a great extent, it reflects the government's concern over the fact that American students don't perform as well as students in other countries in math and science. It also reflects state concerns over whether students in the United States will have the basic skills necessary to perform jobs that must be filled to continue to fuel our service-oriented economy. In addition, state concerns over student performance gaps directly affects the choices the government makes about what gets taught and assessed. NCLB has had a profound impact on the contemporary curriculum and the manner student mastery is assessed. NCLB has led to the creation of a curriculum that is heavily weighted towards math, science, and language arts, and has led towards the reduction in arts education.

Critical theorists and conflict theorists agree with the concept that, in western societies, the primary purpose of schooling is to enable the dominant classes to maintain power and influence. This is achieved through the processes of economic, cultural, and hegemonic state reproduction. However, critical theorists highlight the power of individuals and small groups of people to work collectively to mitigate the impact of oppressive educational institutions and create more effective, egalitarian schools that are designed to meet the needs of students, not the needs of the state.

### **3. Arts Education and Hegemonic State Control**

In many respects, the No Child Left Behind Act of 2001 serves as a concrete and contemporary example of the role hegemonic state control plays in the development of the contemporary curriculum in American schools. NCLB is a law created by the state in an effort to create a human workforce that is prepared to meet the perceived needs of businesses and corporations that must compete within a global economic environment. Research studies have

demonstrated that, since the passage of NCLB, there has been a significant, palpable decrease in structured arts education opportunities for students in American schools. One fifth of school districts reported that their elementary schools had reduced art and music education “somewhat” or “to a great extent” [2]. A survey of principals conducted in Illinois, Maryland, New Mexico, and New York found that 36% of high-minority schools had reduced time for the arts [10]. Among districts that reported a decrease in instructional time since 2001-2002, 23% reported decreasing total instructional time for arts and music by 50% or more below pre-NCLB levels-greater than social studies, science, and physical education [9]. For districts with at least one school identified for NCLB improvement, the average number of minutes per week devoted to art and music is fewest out of all subject areas studied, with 97 minutes of arts compared to 568 for reading. In addition, 30% of districts with at least one identified school-those with students most responsive to the benefits of the arts-have decreased instructional time for art and music.

The reduction in arts learning opportunities for students in American public schools is significant, because there are direct, positive correlations between arts education, cognitive development, and student achievement. One of the most effective arguments for the full integration of arts education into the public school curriculum involves the relationship between arts training and cognitive development, or the mental processes humans use to complete tasks, process information, and solve problems, and arts training has been associated with higher academic performance. In order to strengthen the body of research concerning the connection between arts learning, cognition, and academic achievement, researchers are amassing a body of research using brain-based research to determine the impact of this correlation.

Specific links exist between high levels of music training and the ability to manipulate information in both working and long term memory; these links extend the beyond the domain of music training [20]. In children, there appear to be specific links between the practice of music and skills in geometrical representation [32]. Correlations exist between music training and both reading acquisition and sequential learning. One of the central predictors of early literacy, phonological awareness, is correlated with both music training and the development of a specific brain pathway [36]. Learning to dance by effective observation is closely related to learning by physical practice, both in level of achievement and also in neural substrates that support organization of complex actions. Training in acting appears to lead to memory improvement through the learning of general skills for manipulating semantic information [13]. Effective observational learning may transfer

to other cognitive skills [17]. In addition, early and extensive music education has a direct, positive correlation on adult learning of a new language in an instructional setting [28]. Finally, an interest in a performing art leads to a high state of motivation that produces the sustained attention necessary to improve performance and the training of attention that leads to improvements in other domains of cognition [29].

These statistical results help underscore the important position arts education has in supporting the cognitive development and academic achievement of students, and pave the way for developing new understandings for effective changes schools can take to strengthen the educational process for underserved students and improve the academic success rates extant in low performing schools. The links between arts learning, cognitive development, and academic achievement provide a potent potential pathway for creating greater educational equity in American public schools, and providing minority students and students from lower class backgrounds, with ways to transcend the social stratification that tracks them towards blue-collar and service oriented professions and insures their continued existence within the lower socioeconomic stratum of society.

In spite of the promise coordinated arts learning opportunities hold to level the economic and educational playing fields, mounting evidence indicates that the systemic decrease in arts education opportunities has affected low-income, minority, urban and rural schools most sharply. In a 2009 study conducted by the Government Accountability Office entitled “Access to Arts Education”, results obtained indicated a general decrease in instruction time for arts education with “statistically significant” differences across school characteristics. Teachers at schools identified as needing improvement and those with higher percentages of minority students were more likely to report a reduction in time spent on the arts. In addition, study results showed that teachers at elementary schools with higher percentages of low-income or minority students reported larger arts instruction time reductions than teachers in schools with low percentages of low-income or minority students [1].

#### **4. Author Community-Wide Coordination**

One of the techniques urban communities across the country are using to counteract the hegemonic practice of denying students access to arts education opportunities involves community-wide coordination of arts education programs. Community-wide coordination refers to small and large-scale efforts to use a community’s provider organizations to bring arts education opportunities to all students,

regardless of race, gender, and socioeconomic background. These initiatives provide opportunities for students in a variety of ways, from sequential arts courses offered in schools, integration of the arts throughout the curriculum, and outside of school programs for arts learning and participation.

The motivation for the development of these school-community based programs is essentially two-fold. Many of these programs developed in response to the fiscal crises of the 1970's and 1980's. These conditions led to wide-scale teacher layoffs. Many of the teachers who were released taught in arts-related fields like art, music, dance, and theatre. These programs have also been developed in response to the reduction in arts education opportunities as a result of NCLB.

To date, community-wide arts education efforts have served to increase arts learning opportunities for students, and have expanded access for minority and low-income students in urban settings. The impact and success of these efforts vary greatly from district to district, and are hampered by organizational and funding challenges, particularly in light of the recent downward swing in the global economy. In spite of these challenges, community-wide arts education partnerships represent a plausible movement to challenge hegemonic state control and incorporate arts learning opportunities for all children, regardless of their backgrounds.

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# Developing a Paradigm to Describe Diversity and Multi-culturalism in Modern America

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## Abstract

*The misconceptions about roles and characteristics of diversity and multiculturalism still exist in American Society. Multiculturalism is a misnomer. Definitions and interrelationships are skewed as there are many unanswered questions "to what extent the society is multicultural?" The objective of this paper is to illustrate and discuss a theoretical construct, where it will be possible to define, examine and test specific variables that define cultural neighborhoods. A group of Defining Intracultural Traits (DITS) creates a clear picture of how diversity and multiculturalism remain distinct entities within the United State societies. DITS variables include: Language, Food, Religion/Ideology, and Comfort with Customs. Models are introduced which show the force field relationships between cultural entities. This paradigm illustrates opposing fields which prevent the free sharing of culture on anything but a superficial level. This position prevents anything but a casual sharing of cultures within public settings such as the workplace, schools, sports events, etc. American society does not exhibit many of the characteristics of assimilation and cultural integration which is often touted. American culture continues to be neighborhood bound. Future study is indicated to test whether the paradigm is a valid tool for representing cultural inter-relationships in the United States.*

## 1. Introduction

The United States have rightly earned the distinction of being the world's melting pot. Emma Lazarus' poem from *The New Colossus*, engraved upon the base of the Statue of Liberty, articulates this place in the World:

*Not like the brazen giant of Greek fame,  
With conquering limbs astride from land to land;  
Here at our sea-washed, sunset gates shall stand  
A mighty woman with a torch, whose flame  
Is the imprisoned lightning, and her name*

*Mother of Exiles. From her beacon-hand  
Glows world-wide welcome; her mild eyes command  
The air-bridged harbor that twin cities frame.  
"Keep, ancient lands, your storied pomp!" cries she  
With silent lips. "Give me your tired, your poor,  
Your huddled masses yearning to breathe free,  
The wretched refuse of your teeming shore.  
Send these, the homeless, tempest-tost to me,  
I lift my lamp beside the golden door!" [1]*

With such powerful imagery these lines serve as a relevant discourse of our nation's immigration history. However, the continuance of that discourse has veered off course due to the unnecessary complexity of the multiculturalism debate.

For two centuries this country has developed a patchwork of populations drawn from all corners of the world. Yet, the reality of socio-economic hierarchy favors the descendants of early white Anglo-Saxon settlers. While in years hence, the financial worlds have been influenced by German-Jewish émigrés in the early 20<sup>th</sup> century [2], a few other groups have been able to similarly penetrate the socio-economic hierarchy.

The turmoil of the Civil Rights movement and subsequent legislation has led to an opening up of the society but not to the extent that the pundits might assume. This discussion will instead focus on the idea that American society has not become multicultural although there is diversity in the public sphere of American society. In reality multiculturalism is a misnomer. The idea of self-contained cultural neighborhoods with all the inherent characteristics remains valid, with few exceptions. The authors propose here a paradigm/model designed to graphically display a theoretical construct of these cultural neighborhoods which will be illustrated and further offered for explanation.

## 2. Problem Statement

Contemporary academic discourse regarding multiculturalism has run adrift on the sandbars of various methodologies and disciplines. The field

needs well-defined paradigms to accurately describe contemporary cultural experience and reality.

For the purposes of this discussion, the term diversity will be defined as a social structure or group which includes participants from varying racial, ethnic, religious and family organizations, as gender inclusive in casual or public settings. It is heterogeneous in all senses of that word. Multiculturalism will be defined as a set of social structures and groupings which include varying ethnic, religious and family organizations as well as being gender inclusive throughout the social fabric of both public and private encounters. Multiculturalism therefore by this definition is inclusively cross-cultural and intercultural by means of communications and social strata.

The proposed paradigm represents in visual terms that diversity is two-dimensional and multiculturalism is three-dimensional. The dimensions of diversity include a superficial even if sincere sharing of more outward cultural expressions such as accent born from a foreign language or even certain slang or inflections which find their path into the majority language in public places. Common among this dimension would be such Spanish expressions as “Adios” for “See you later” or “muchacho” for “friend.” Hebrew and Yiddish also display movement into the general American English lexicon with sometimes less than complimentary labels. The second dimension which sometimes finds its way into the public consciousness is food. Where would American society be without *ravioli*, *wontons*, or *bagels*? However, as we move into the three dimensions of multiculturalism, we must acknowledge the existence of a slightly permeable membrane in neighborhoods. This membrane allows for interaction among visitors and residents, but does not permit the permeability of meaningful sharing of language, customs, food, or cultural traditions outside the perceived confines of the specific insular cultural group.

Culturalism is by nature nation-bound. It is rigid and not easily shared given neighborhood boundaries of language, food, common church or religion and comfort/informal tradition adherence. These are the limitations and the defining characteristics of cultural difference and sameness.

It is possible to take exception to this thought path because anomalies may exist. Among these is the idea of diversity and multiculturalism within homogeneous and self-contained societies which might be separated by any number of factors including race, geography/region, and religion even within what casually appears as an intra-similar society. Examples of this include many of the South Asian nation-states such as China, Korea, and Japan, and also, the Middle Eastern countries such as Israel, Saudi Arabia, and Egypt. However, it can be theorized that variations within these self-contained

cultures do exist, given variation customs, traditions, and languages similar to the differences in traditions across regions found in the United States but not to the same degree. However, for the purposes of this discussion, the ideas surrounding diversity and multiculturalism are to be limited by this thesis in application to American society in the early years of the 21<sup>st</sup> Century.

### 3. Literature Review

Debate surrounding this topic led to the development of this paradigm. An abundance of terminology coupled with a lack of both clarity and reflection have produced a nebulous discursive on the elements of multiculturalism and diversity. Academicians from fields such as English, Sociology, Anthropology, Communications, and Library Science have contributed to, and extended the debate on multiculturalism and diversity.

The notion of polycentric multiculturalism, posited to provide a way in which to make multiculturalism more accessible on global terms, serves to differentiate itself from liberal pluralism. It achieves this by embracing a radical reformulation of urban and community structures at the level of neighborhood and nation-state [3], [4], [5]. Other researchers have suggested that a significant multiculturalism must include the “politics of equity, economic redistribution, and social restructuring” (also referred to as *critical multiculturalism*) [6]. These assertions and definitions are infused with political affectations which are difficult to test empirically. Further, these opaque musings lack the theoretical clarity necessary for progressive debate.

Does multiculturalism, as a term, epistemologically differ from assimilationism? The melting pot imagery connected with multiculturalism suggests a kind of assimilation [6], [4]. Assimilationism differs structurally from fragmented pluralism, which envisions the existence of encapsulated and distinct cultural communities. Whereas assimilationism is political, fragmented pluralism is more group-oriented and social [6].

As a term, multiculturalism suffers from the inadequacies consistent with being used to describe and define a host of schemata. On the one hand, multiculturalism is a mere re-phrasing of cultural relativism [4]. Yet, on the other hand it represents something potentially dangerous; it implies a notion that threatens the foundations of civil rights and the “regulatory power of affirmative action to embrace a notion of diversity where ‘all differences are equal’” [7]. This potentially controversial view posits that diversity is wholly immutable given that as a cultural component, it is not to be haphazardly described and defined. In other words, difference and diversity seem to be positive components of society. Perhaps multiculturalism itself does not actually exist.

While diversity is apparent throughout the United States, multiculturalism often needs to be defined by or assigned to a specific context to make it real [8]. One study in particular found that trust is far more fleeting among counterparts of given minority groups than members of a majority [9]. Indeed, it appears that neighborhoods which are argued to be multicultural are less likely to perceive and execute interpersonal trust. The same study found that individuals who regularly interact with their neighbors are not as impacted by the perceived realities of race and ethnicity when compared to individuals without such interaction. Within Lewin's theories of Forced-Field Analysis there also lies the basis for this current thinking surrounding diversity and multi-culturalism [10] demonstrates that change takes place within society and/or organizations in different stages, starting with the status quo which within the present discussion would be represented by the continuing and protective integrity of cultural neighborhoods. After the status quo is established and maintained, pressure(s) act upon the static situation forcing movement. After moving, there is a refreezing of position and reestablishment of a status quo. Changes in position(s) can occur quickly or slowly, once or many times as the forces dictate.

#### 4. Models

Assumptions: Within any self-sustaining culture there exists a group of characteristics which can be described as Defining Intracultural Traits (DITS). These traits define the cultural neighborhood and include (1) unity of language characteristics which encompass signifiers and signs, semiotics and semantics, verbal and non-verbal; (2) similarity in food including the foods and beverages which would be served at traditional and/or familial gatherings; (3) participation in church, religion or other ideologically-based behavior encompassing those characteristics within the realm of religion and place of worship and/or spiritual-ideological gathering ; and, (4) comfort level within the customs of a specific group signified by the familiarity and comfort level relative to the individual or group of a particular linguistics, cultural, and religious background and/or ethnicity. For the purposes of this discussion they shall be referred to in order as Language, Food, Religion/Church, and Comfort Level.

Societal pressures might suggest that self-sustaining cultures will move towards each other and share superficially out of the cultural neighborhood meeting in and forming the diverse public sector  $\alpha$ . In all scenarios, each cultural neighborhood is bound by these characteristics only joining in the public sphere of  $\alpha$ . DITS continues to be present and identifiable in all sectors reflecting varying levels of sharing and intensity of interaction. There are two

distinct stages in the development of this theoretical construct. The first, "Establishment and Maintenance of Independent Self-sustaining Cultural Entities" represents the status quo. It illustrates how distinct cultural neighborhoods independently revolve around a public diverse sphere  $\alpha$ .  $\beta$ ,  $\gamma$ ,  $\delta$ , and  $\epsilon$  all represent specific cultures and, clearly, many more such entities are present in American society. The second paradigm, "Separation, Intersection, and Characteristics of Cross Cultural Interaction" illustrates the results of changing dynamics and movement. It demonstrates that when forces change, there is change which in terms of self-sustained cultural neighborhoods results in the formation of a causal relationship between varying cultures and their DITS. This supports the train of thought that cultures within the same general society will meet, at least casually in the public  $\alpha$  sector sharing easily digestible and acceptable bits of unique cultures.

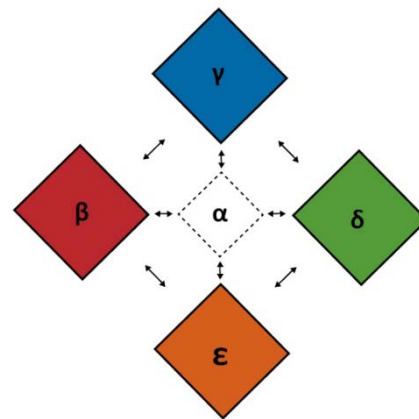


Figure 1. Establishment and Maintenance of Independent Self-Sustaining Cultural Entities

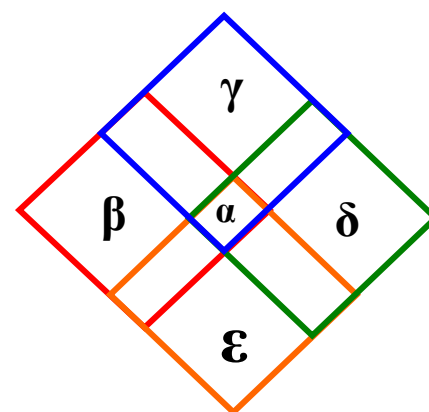


Figure 2. Separation, Intersection, and Characteristics of Cross Cultural Interaction

#### 5. Discussion

The illustrations above are both comprised of four diamonds. The researchers have used a diamond



template given the related work accomplished in the field of sociology and anthropology [11]. However, this paradigm differs given its inclusion of language. Within the construct of a universe of Self-Sustaining Entities as graphically depicted in Figure 1, one observes distinct cultural neighborhoods, each containing to some degree a unique combination and intensity of DITS.

The cultural neighborhoods are described as the diamonds  $\beta$ ,  $\gamma$ ,  $\delta$ , and  $\epsilon$ . They are not static. Figure 2 illustrates that the neighborhoods can and do change position on an angle moving in towards each other eventually meeting in a public sphere. When the paradigm has shifted sufficiently, a new model results exhibiting characteristics of a new relationship between culture is exhibited. In the model describing Cross Cultural Interaction the intersecting kaleidoscope diamond in the Center ( $\alpha$ ) is the result of the intersection of the four diamonds ( $\beta$ ,  $\gamma$ ,  $\delta$ , and  $\epsilon$ ) which culturally exist independently except at the intersection area.  $\beta$ ,  $\gamma$ ,  $\delta$ , and  $\epsilon$  each continue to represent a unique and self-sustaining culture. They all continue to support unique cultural profiles only intermixing in the  $\alpha$  room.

Indeed, the model supports the idea of developing a post- $\alpha$  diamond for each self-sustaining extant culture in the United States as the paradigm shifts. Diversity exists in the  $\alpha$  sector, where the intersection takes place. This is the public sector; the workplace, schools, free access settings such as museums, etc. Within  $\alpha$ , there is what can be described as casual sharing of culture such as holiday trappings, common religious knowledge, foods which might find periodic, momentary acceptance, and perhaps some smattering of casual language as it applies to the setting (greetings, thank you, etc.) Not to be misunderstood, these public settings are diverse and reflect the richness of the American patchwork of cultures. Even to the point that it can be accepted that decisions and decision-making patterns are at least partially influenced by the sometimes self-culturally referenced inclusion of a variety of backgrounds and experiences.

Within the  $\beta$ ,  $\gamma$ ,  $\delta$  and  $\epsilon$  sectors independent culture sustains itself separating by exclusive language, food, and church/religion and comfort level. To be more specific, American sub-cultures exist reflecting the myriad of nation states that have sent citizens to U.S. Soil. Therefore, the integrity of the culture is buoyed and the free sharing is lessened.

It is possible to hypothesize what this model will resemble as the  $\beta$ ,  $\gamma$ ,  $\delta$  and  $\epsilon$  diamonds push into  $\alpha$ . There are two theories. The first is that as true multiculturalism increases, as displayed by an enlarging of the  $\alpha$  sector, the other diamonds will by balance become smaller. In another view, it is possible that the outside diamonds will become smaller; simply stated, the  $\alpha$  sector will remain the same size but increase *in density*. The density might

reflect a true interweaving and creation of a common culture based on a melding of language, food, church, and comfort level. Of these, the most likely to remain chauvinistic is the church religion piece due to dogma. The religion/church characteristic will work against the realization of true multiculturalism because of inherent, independent dogma separating and maintaining itself and its integrity. The paradigm becomes three-dimensional as more aspects of culture are shared across both the horizontal and vertical axes of DITS. The more intimate or open DITS becomes, the more truly multicultural become the interactions and communications. As the status quo of Cultural Neighborhoods continues, the two-dimensional paradigm remains in force.

This model's validity is also supported by examination and inclusion of media and its analysis in the present time. A future study will examine the model in an effort to test whether it is a viable tool to aid in the understanding of multiculturalism and diversity. Within an incremental approach to validating this theoretical construct, the researchers will create and administer a survey based on a qualitative research design. The survey shall seek responses which will test the theoretical construct here introduced.

## 6. Conclusions

It is not possible to accurately predict neither when multiculturalism will become a reality nor how long cultures will remain self-sustaining. These ideas are clearly interconnected. Cultures will remain self-sustaining as long as there are links to the parenting culture and a working knowledge of native language exists in the participants of that particular culture, or cultural stratum. True multiculturalism will increase in the United States when cultures and peoples actually grow further away from the hegemonic culture taking pieces of the home cultures generationally, and absorb the strongest pieces thereby moving into the  $\alpha$  sphere. The problems and challenges pertaining to sustaining language, culture and tradition are daunting. It is the maintenance of the cultural neighborhood which often acts as the cohesive element in holding basic family units together in the light of everyday societal pressures working to upset that balance by forming the larger unified multicultural  $\alpha$  sphere. Yet, within the United States, the formidable pressures work together forming a unique force field which at once pushes the society together and presently holds the neighborhood as distinct units. The end to this story has yet to be written as American society continues to play out the scenario so eloquently chiseled on the welcoming arms of Lady Liberty.

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# **“Being There”: Can the Presence of the Student during the Assessment Process Help in Their Learning?**

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## **Abstract**

*The Design studio learning system within most Tertiary Design Schools has a unique critique method, (often called “The Crit”), The Crit event itself is rather a “veiled” process and has been analysed and written about extensively. There has also been a lot of negative feedback from students that this form of critiquing process is not necessarily a good type of feedback process. Is there a method that protects the student’s privacy related to his or her own design work and at the same time maintains the Design School’s integrity of supplying reasoned and fair assessment within the wider Profession? A field trial scenario was designed and arranged with a group of volunteer design students, so each in turn, could sit-in and witness their own assessment / feedback session. This paper reports on this field trial, (timed to occur after the critique). This paper analyses this experiment, exploring the field trial responses, looking for links within a wider Educational literature base to the ground this “Being There” scenario within known pedagogies. NB. This scenario is not proposing to supplant “The Crit,” the intention is that it in addition to it.*

## **1. Introduction**

In response to the nineteenth century Industrial Revolution, the Ecole Des Beaux Arts, (School of Fine Arts), in Paris, set up an architectural educational system where the “learning by doing,” [1], superseded the previous lecture system, Students were put into “ateliers” or studios, which were led by “patrons” or Masters. However the evaluation of the student work was done via a “behind-closed-doors jury” system. Students got back their work and marks with little or no comment from the assessment jury.

Today Studios in Design schools around the world are places of learning incorporating rigorous iterations of drawing, model making and debate with those students working on a common design problem.

The review or critique, (often called “The Crit”), of the student work being a “pin-up” of all the work, and each student in turn stands up, and presents their work to both peers and the “jury,” (often containing outside practicing Designers as well as the Studio Tutors). The jury can ask questions, make suggestions and comment verbally as they see fit. This Crit session can form the basis of the assessment.

Assessment within The School of Architecture and Landscape Architecture, (ScALA), Unitec, Auckland, New Zealand is done after the Crit, by the Studio tutors only. Subsequently, (due to the large numbers of student work to be marked), the tutors meet as a body for a “Moderation” type session to review and to equate the marking, so there is a consistency across the Studios. This Moderation process is really a discussion amongst the tutors of how they perceive the creative aspects of project brief relative to the offering responses generated by the students. This discussion can be quite robust and wide ranging about what are valid responses and what are the matching grades to these responses. The marks are released then publicly, (with just student code numbers matching the grades), so the students can see how they have performed relative to their cohort. The ScALA studio tutors also write up a comment sheet for each student, which forms the feedback aspect of the process.

## **2. Research Process**

The findings of this paper are based on a small field trial set within ScALA. A call for volunteers was made to a group of second year Bachelor of Landscape Architecture students. Six students agreed to take part in the trial. Each student was asked individually to enter the assessment room and sit behind the tutors, each was allowed to watch and listen to the tutors as they discussed that particular student’s A1 sized drawings. The volunteer could therefore see and hear “first hand” the tutors as they worked out the individual feedback comments and the associated grade.

The volunteer was not allowed to speak during the assessment process.

Following the event, and related only to this author's field trial, each student was asked to comment on something which was "good" about the process they had witnessed, something which was "hard" to hear about their work / performance and any other "learning's." The data forming the basis of this paper was gathered via a written questionnaire, which was triangulated by the verbal responses recorded by the author. The written questionnaire, asked various questions related to the event and asked the student to rate the usefulness of the event, (on a scale from 1 to 7). The questionnaire was filled out, (privately and in a separate room), by each volunteer following his or her assessment event. The received comments seem to evoke four educational themes:

- Direct learning
- Wider life-skill learning
- Positive performance reinforced
- Deep learning

### 3. Analysis

The comments received from the field trial become the data, which was then analyzed, and linkages sort within the wider realm of research literature. The four educational themes evoked from the data are now discussed in greater detail:

#### 3.1. Direct Learning

The time taken to look at, consider and grade each students work, (comprising 4No. A1 sized sheets of detailed drawings), generally took about 10-15 minutes for each student.

During the process it was apparent the tutor's behaviour was modified, (compared to current versions of this assessment process), for example: no swear words were used. The tutor's comments where specific, (yet sensitive, as they knew the student was indeed present), the tutor's discussion went straight to the heart of the work. (One tutor had a master comment sheet, which was marked up and amended - for later typing up and returning to each student, as a record of the oral feedback). Each tutor offered up his own personal views of the work. The comments and grade where both considered at length and agreed to by the tutors. These characteristics fall into line with some of Boud's thoughts about "offering good feedback." Namely, "[the tutor's] did not use fancy words or abstract language," and they where "consciously non-judgemental," [2]. Care and consideration where shown in relation to both the feedback wording and the

decided upon grade. "It is up to the...[student]...to accept or reject them," [3].

This transparency, afforded by simply "being there," is immediate and direct, there are no proxy methods for information transfer, it is a "*here-and-now concrete experience*," as cited by Kolb, [4]. In his discussions on the "Lewinian Experiential Learning Model," Kolb adds, "when human beings share an experience, they share it fully, concretely, *and* abstractly...[an] immediate personal experience is the focal point for learning, giving life, texture, and subjective personal meaning to abstract concepts and at the same time providing a concrete, publicly shared reference point for testing the implications and validity of ideas created during the learning process," [5].

It would also seem by allowing students to witness their own assessment events directly has the potential to cut through perceived conventions about marking, (misconceived or otherwise), which can avoid confusion of double-meaning readings of other feedback techniques. In addition, it is apparent that this technique can expose the so-called "hidden criteria," aspects that Tutor's may have. "For example many teachers dislike errors in spelling and punctuation...they may admit to their colleagues that such factors influence their response to their students' work...[but] the students may not realise the effect they have on [their] marks," [6].

Endeavouring to make it a "win-win" scenario as far as the tutors are concerned, Gibbs & Simpson add: "the trick when designing assessment regimes is to generate engagement with learning tasks without generating piles of marking," [7]. With further modifications, (which will be touched on later), this may be possible with this technique.

#### 3.2. Wider Life-skill Learning

A comment received from a field trial participant: *More information about what its like in the professional realm*, seems to acknowledge that learning the goes beyond the mere Studio setting. Kolb, comments that, "the casual observer of the traditional educational process would undoubtedly conclude that learning was primarily a personal, internal process requiring only the limited environment of books, teacher, and classroom. Indeed the wider 'real world' environment at times seems to be actively rejected by educational systems at all levels," [8].

This study attempts to address this perceived imbalance, by making available: experienced, professional designers critiquing student work, giving a glimmer of what it is like "out there," whilst still within the confines of the Design School.

It would seem that this study shows that learning can take place within the confines of this type of assessment process, not only curriculum related but also on a broader scale. For example: the tutor's talked about constructional aspects of the student's proposed drawings, (as though Building Contractors), and with that comes an associated technical language that if not allowing assimilation, at least is heard by the student. As Kolb's writes, "Learning is *the* major process of human adaptation. This concept of learning is considerably broader than that commonly associated with the school classroom. It occurs in all human settings, from schools to the workplace...in personal relationships and the aisles of the local grocery. It encompasses all life stages..." [9].

During this field trial, a participant noted, how pleased that her attitude, commitment and interest in the subject were noted and taken into account during the assessment - this was a pleasant surprise to her, as she says in her own words: *Unique opportunity to learn more about things discussed in marking an assignment other than the technical requirements of the brief - i.e.*

*Attitude*

*Scale*

*Commitment*

*Interest in Landscape Arch. etc.*

Yet, the tutors felt they were just doing their job, it seemed natural to think about this learner not only as a potential professional Designer but also as an individual, and to pass comment on her other special attributes seemed normal and valid. Again Kolb amplifies this point, saying, "Learning is an holistic process of adaptation to the world...it involves the integrated functioning of the total organism - thinking, feeling, perceiving, and behaving," [10]. That the above student's enthusiasm was noted and impacted on the assessment is an example of this holistic approach.

As Kolb adds, "the [important] central role... experience plays in the learning process." [11]. This "Being There" scenario is an "event," (albeit with some acting type qualities - by the tutors, and even though there are some rules to govern it), it is an experience. It was humane, it was real, it was private, and the "tape" of it can be replayed within the learner's mind at a later date, the event then becomes part of them, and can be meshed together with all of his / her experiences that go to make up the richness of that particular individual.

### 3.3. Positive Performance Reinforced

As tutors, we always try to work from a "positive" angle, we are always trying to find something worthwhile and upbeat about any particular student's design work, and there usually always is something to

praise. By the identification of talents, positively encouraging a student, one hopes to build up their confidence. By bolstering individual skills or leanings, the tutor also hopes that individual will feel "good about themselves," and feel their approach to design is "special" and is as valid as anyone else's.

"Strength Based Learning" or "Strengths-Based Development" involves a similar technique to this "Being There" concept. As a method it can be described as: "rather than spending time helping their associates become 'well rounded,' many...managers have instead invested time in learning about individual talents of each of their associates, and managing with those unique talents in mind. This concept not only applies to managers, but to educators, [and] students..." [12].

A 2003 Gallup worldwide poll question asked: "Which do you think will help you improve the most? Knowing your strengths or knowing your weaknesses? The poll result being: "people think focusing on weaknesses will help them improve more than focussing on strengths." Following this poll Hodges and Clifton, reiterate: "there is clearly a need to educate the world about positive psychology in practice and the importance of understanding and focusing on strengths," [13].

The positive comments received back from one student: *The whole process was a good learning experience. Definitely beneficial. And it's nice to hear positive feedback.* Such remarks and the high ratings received perhaps offer support for the phrase: "assessment *as* learning," that there is some additional learning to be found from within this type of assessment / feedback process. Torrance also uses this phrase, "assessment *as* learning," [14], but with a "negative spin" on it, he lays out the case that learning has being shunted aside by the demands achieving, i.e. passing without understanding. People are coming into tertiary education as a means-to-an end, a ticket to a job or a pass to a new career. A commitment of both the assessors and each learner to be in the same space, at the same time, focussed on the potential of that one learner seems to be precious. Comments spoken openly about the talents of that particular person, each learner is being privileged to hear first hand positive comments that may will bolster that person's "well being" and encourage them to consider their own "road ahead" and how they might modify their own behaviour for that journey.

### 3.4. Deep Learning

From this field trial the idea that "deep learning," (as apposed to "panning" or memorising information), is in fact sought by the student learners, was elicited

by: *I think it will help to make one's work evolve or develop more.* "Learning conceived holistically includes adaptive activities that vary in their extension through time and space. Typically, an immediate reaction to a limited situation or problem is not thought of as learning but as *performance*. Similarly at the other extreme, we do not commonly think of long-term adaptations to one's total life situation as learning but as *development*. Yet performance, learning and development, when viewed from the perspectives of experiential learning theory, form a continuum of adaptive postures to the environment, varying only in their degree of extension in time and space," [15].

Design, as a field of endeavour, is not right or wrong type subject, it is subjective and the learning required to grasp its multiple faceted nature is part of a long progression. For example: one finds out about the history of Design and its impacts, the techniques and methods required to "put something together," its contractual and legal aspects, - these are just a few examples of some of the issues that need to be assimilated over a lifetime. That this participant above, is thinking long-term about their evolution is suggestive to the author that there is indeed an understanding of the complexities involved and that this "being there" technique provides some experiences that can be "mined" for additional fertile learning.

Another feedback comment was: *Gave me a much better understanding of the design processes.* The notion that a deeper awareness or some understanding has been achieved also seems meritorious. As Knight & Yorke, intone: "Understanding, (as a term, [is], preferred to 'knowledge' because of its implication of depth), is the key outcome of higher education." [16]. The design process has to be engaged with, it has to be encountered, felt out by trial and error, it is simply not just knowledge in the sense of: 'who was the first man to land on the moon?' Or, as Sullivan, says: "Research has indicated that deep learning is linked to providing a stimulus in a way that leads students to focus more clearly on their particular topic, and then giving them the opportunity to reflect on and respond creatively to their chosen topic so that they can claim ownership of it," [17].

This idea of "ownership" or preference of a way of working around and through a Design problem is important at this time for a student, because what the tutor's are really trying to do is help students to find their own individual "voice." Schools of Design and the wider Profession are always trying to encourage individual responses to new social issues of the day, as humanity continues to evolve. In fact Designers are often sort out because of 'who they are,' their perceived personality can in fact be a marketing tool, and thus the need to foster individualities within the

profession provides for a range of characters potential clients can choose from.

This development of characters or personalities within the design profession reflects what Rowntree also says that: "what grades, [alone], don't do is tell all that is known about the student's performance or abilities. Information is lost," [18]. The author also takes the stance that the grade is just a 'mark on the page,' rather it's the feedback that can mould the personality. Feedback is therefore critical in improving performance. As Rowntree adds: "feedback or 'knowledge of results', is the life-blood of learning," [19].

Nicol and Macfalane-Dick also say, "good feedback practice is broadly defined...as anything that might strengthen the students' capacity to self-regulate their own performance," [20]. By the student witnessing the methods of how professional people critique their work, this process could be taken away, and perhaps used on the next project - thinking back, the same student wonders: "what would Tutor A or Tutor B think about my current scheme?" Copying known modes of behaviour as a starting point for self-analysis. "Developing an understanding of [one's] own way of learning can help [one] understand and develop [the] whole learning process... it is an important part of [one's] professional development to be able to learn from events by reflecting on them, developing understanding through that reflection, and applying and testing out that new knowledge in new situations," [21]. And so after, (generally), 5 years of intense reflecting-in-action, the Design protégée's are released from the School to take on the new design issues of the day.

#### **4. Comparisons of "Being There" Technique with respect to Current Types of Assessment:**

##### **4.1. Comparison relative to the Crit**

One student stated: *It was very similar to the crit process that we already go through before hand-in, without the stress of having to verbally explain in front of the group.* This "Being There" technique is not another type of Crit, the student is able to "sit back" and listen to others read and judge his / her work, without the worry of "standing up" and defending one's own work. Some students find the whole Crit process a blur; they can just get so worried about getting through it, that they cannot even remember any comments afterwards. In putting forward a conceptualization of feedback, Hounsell argues, "student engagement is at the heart of the process,"

[22]. Although it might sound paradoxical, (viz. by listening only, as being seemingly more engaged), the removal of other communication devices, the student can more fully concentrate on the verbal messages because he / she is being forced to just listen and reflect on their self.

*Its more informative, you seeing the marking, you can't get better feedback.* From this received comment, it would seem from this student's feedback was in fact quality feedback, with the learner viewing how and why the marks were allocated first hand. The transparency within the marking process should alleviate previous misconceptions about how marks are allocated and feedback comments disseminated.

*Less regard for your feelings than if they were critiquing you directly.* This comment seems to indicate that there is a sense of "third person" about this technique, by making it "one removed," (the learner is seated beyond the "scene" of the assessment), it may be easier for the learner to absorb the assessment / feedback. The student seems to be saying the feedback is "warts and all" type process, where-as in the Crest the feedback can be "dumbed-down" by the Tutor's so they are "not putting students down in front of their peers."

*I find it more useful as it is more private.* It seems to the author that this type of comment reinforces the School's abiding intention related to privacy aspects of assessment in general; this experimental technique has maintained this goal, (at least in terms of the student's peers). In addition, this "being there" method ensured that each students' work was not compared or "benchmarked" with other work from the same class. It is a personal, intimate event, with close scrutiny of individual work. A full and frank discussion takes place between the tutors focussed on the various strengths, (and if any, the areas that need strengthening), related to the work and its author.

#### 4.2. Comparison relative to written Feedback

One student said: *Far more thorough and [in] depth. When you just receive a paper slip and can find it hard to understand where the marker is coming from.* Written feedback can often take on the form of a "short-hand" type language, which tutors sometimes fall into, (often due to marking loads), and such "final" messages may unintentionally be empty of substance. Written feedback words such as "good," "right," etc...are too final," [23], they can communicate nothing of substance and can be taken to be negative.

Receiving written feedback and assessment can be perceived as: "involving the student in what may be a nerve-racking assessment experience that yet leaves him no wiser as to who he is and what he can do," [24].

Or going even further, as Kirschenbaum, pointedly quips: a "student can be asked, 'What did you get out of this course?' and reply in all seriousness, 'I got a B'," [25].

In comparison this "being there" scenario allows student to be present, so he / she can hear **all** the comments, they see **all** the body language of the tutors, hear **all** the judgements, and **all** in context, picking up on the nuances of the assessing tutors and therefore can take away so much more and reflect upon, compared with just written comments.

Finally, when the trial volunteers were asked about "comparing generally," (with other forms of assessment / feedback), the following comment came from the field trial: *More honest - perhaps because it is "non-negotiable.* Although the student here, is probably more concerned about his perception of an "honest" discussion by the tutors related to his work, the comment could also be taken from the angle of keeping the tutors' "honest" in the face of the student's presence. This seems to add some validity and credibility to both sides of the process. If this transparency is a way of keeping the tutors "honest," then that is good, as Boud, reflects, "the relationship between student and assessor must be critically examined and the limiting influences of such an exercise of power explored." [26].

#### 5. What was not helpful about the "Being There" Process?

The comments from the students centred mainly on logistical matters: time waiting, timetabling, time taken, these were totally valid and are also vitally important when considering the expansion of such an assessment / feedback event to encompass an entire studio class.

#### 6. Limitations of this Study

The "types" of students who volunteered to partake in the field trial were the "keen" students of the class, those who are committed to the degree course. However, does this scenario work with the assessment / feedback of a student who is about to fail the course? (Or does not get as good response / grade as they thought they would get).

How would the comments / grade be received in such an intimate environment? Would that student be able to remain silent, (or possibly burst into tears)? What pressures would be put on the tutors in handling such a delicate finding in front of the student?

These scenarios remain untested and leave the way open for more trials.

This was a small sample of people, (6 out of a possible 22). The end-of-year timeslot that this concept was trialled within may also contribute to such a low turn out. With this in mind, the findings would need to be confirmed by a larger sample. Having said that, the author feels the warm support shown by the volunteer participants and associated staff, (together with the high ratings supporting the concept), makes one feel that this “Being There” technique has some potential.

## 7. Conclusions

“Students can, with difficulty, escape from the effects of poor teaching, they cannot, (by definition, if they want to graduate), escape the effects of poor assessment. Assessment acts as a mechanism to control students that is far more pervasive and insidious than most staff would be prepared to acknowledge,” [27].

This “Being There” technique seems to suggest that by the putting the assessor and assessed in the same room, (with agreed codes of conduct), not only raises the bar of the Assessor’s behaviour, but the quality of the assessment quality is also raised. The student being privileged by being allowed to witness their own assessment seems to make this event special and the outcomes were taken more notice of in comparison to current feedback methods.

As interviewed and quoted by Anthony: Architect: Charles Moore says: “One of the legacies of the Beaux-Arts that we still have with us is that secrecy, the business of retiring into a room where nobody could see what you were doing...To keep people from copying each other is presumably why this secrecy was set up. Yet so much of practice is indeed copying each other, building on each other’s ideas, and keeping other people interested in what’s going on,” [28].

This paper attempts to show how a learner can “be there,” for a time, inside that room, and potentially glean something meaningful about themselves, about their potential and something more about the Design process by witnessing their own assessment and feedback event.

## 8. Recommendations

Rather surprisingly the Fieldwork feedback responses were overwhelmingly positive, e.g. *An in depth analysis on paper and verbally of how the work was marked.*

*Do this, because it keeps you in touch with the reality of your work, instead of kind of forgetting about it once it’s handed in.*

*I think it is better than handing it in, waiting 2 weeks, then receive a grade, because this time gap separates*

*you from your work and your grade. The direct marking of your work is of greater benefit. It would be very helpful to have the marking schedule available when doing the assignment.*

In an effort to make it a “win-win” type scenario: a way of further refining this technique to reduce overall tutor involvement time, would be to use the “common feedback comments sheet,” during the assessment but in a slightly different manner. Namely: during the tutor discussions, those comments that don’t apply are struck out, (with a large felt-tip), and any additional comments are written on the sheet by hand. The tutor then signs it, a scan is then made of the final comment sheet version, (this scanned version then becomes a copy for the School’s records), and the original sheet is given to the student as he / she leaves the room. Assessment, mark allocation, and feedback all done in one neat package.

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# Living Experience: Seeing the Connections in Indigenous Knowledges, Environmental Education and Theatre in Ontario

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## Abstract

*The author employs the concept of lived experience to unify theatrical practice, Indigenous Knowledges and environmental education (EE). This paper stems from master's thesis research involving participant-observer fieldwork and semi-structured interviews with six environmental educators from across Ontario. This research was spurred by several advances in environmental education, followed by much heated discussion, in Ontario and around the world. The Roberta Bondar Working Group's 2007 document "Shaping our Schools, Shaping our Future" served as a starting point. Analyzing the document in the context of theatre and Indigenous studies, the author noted a lacuna in the Bondar report, as well as in much of the EE literature. Environmental education theory, including "cultural" environmental education and "ecoart" education, tend to exclude Indigenous Knowledges and dramatic and performing arts from their discussions. This paper attempts to speak to this lacuna through emphasizing the ways in which a concept of "lived experience" is related to theatre, Indigenous Knowledges and environmental education. It articulates understandings of lived experience in each context, showing these areas of study to be interconnected. Though this is a small piece of a larger study, it is the author's hope that this paper will begin to clarify the benefits of considering these educational concepts together.*

## 1. Introduction

What do theatre, Indigenous Knowledges (IK) and contemporary environmental education (EE) in Ontario share in common? How might environmental educators more deeply consider and integrate Indigenous Knowledges and theatricality into their teaching and learning? The answers to these and similar questions have been the focus of the author's master's thesis research. While this research uncovered a variety of interconnections, the focus here will be on the ways in which an understanding of lived experience runs through theatre, IK and environmental education. At first glance, this appears to be a truism. Surely all

education, and indeed all human endeavours, involve lived experiences. What experiences are available to be had that are not lived experiences?

## 2. Literature Review

As R. Burch explains in his article "Phenomenology, Lived Experience: Taking A Measure of the Topic," the challenges faced in making sense of the expression "lived experience" come from translating into English the original German terms. Burch articulates, "[a]ccording to its origin, [lived experience] connote[s] what personally and immediately 'one experiences for oneself,' apart from all hearsay, conjecture, or imaginative and ratiocinatory constructions, and [...] it connote[s] the persisting content of that experience (das Erlebte), 'its discovered yield, its lasting residue'[1]."

In the context of education, lived experience therefore refers to situations in which students are personally confronted with learning through a direct experience or encounter, rather than being taught about experiences through the interpretation or lens of another person, such as an educator. Lived experience also implies that these are encounters that students remember. Both the imperative to get students outside of the classroom, allowing them to learn directly from the land and their own experiences, and an emphasis on 'memorable' learning experiences were significant recurring themes across the six semi-structured interviews that were conducted with environmental educators across Ontario for the author's master's study. The incorporation of lived experience into their teaching contexts is evidently a concern for these particular environmental educators, but what of lived experience in theatre, Indigenous, and environmental education as they are more broadly defined?

In her article "Coming Full Circle: Indigenous Knowledge, Environment, and Our Future," Deborah McGregor explains how lived experience is relevant to Indigenous Knowledges: "The 'natural world,' 'environment,' or 'Creation' is an essential part of the conception of IK. IK is not just 'knowledge' per se. It is the lives lived by people and their particular relationship with Creation [...] Indigenous Knowledge cannot be separated from the people who hold and practice it, nor can it be separated from the

land/environment/Creation [4].” This quotation articulates how the relationship between lived experience and Indigenous Knowledges is directly relevant to the EE context. Many Indigenous traditions maintain that the land is the first and most important teacher [6]. Thus living personal experiences with the land is an irreplaceable part of learning the lessons one needs to survive and thrive. Though contemporary Western environmental education does not tend to recognize all of the aspects of survival facilitated by connecting with the land the way that Indigenous education understands, it has begun to emphasize the need for students to learn environmental lessons through direct experiences on the land.

### 3. Analysis of Findings

“Experiential” is a buzzword now commonly associated with Western environmental education. Although experiential considerations are not always incorporated into environmental programming, the increasing popularity of this concept is at least a nod to the significance of lived experience in environmental teaching and learning. According to Laura Joplin, programs must include two distinct but interconnected components in order to be deemed “experiential:” “Experiential programs begin with two responsibilities for their program design: providing an experience for the learner, and facilitating the reflection on that experience [3].” Experiential learning can thus be conceived as lived experiences on which students are expected to reflect. The connection between the terms “lived experience” and “experiential” is deepened if one considers that the process of reflection may encourage the retention of learning. Many environmental educators would agree with Anthony Weston’s assessment, in the article “What if Teaching Went Wild?:” “Almost by necessity, school cuts us off from the experience of a larger world: from natural rhythms, natural beings, more-than-human flows of knowledge and inspiration. In fact, we could hardly design a worse setting for environmental education![7]” However, that this situation is being recognized, called to task, and directly challenged demonstrates an increasing recognition of the importance of lived experience for environmental education. As environmental education gains more widespread attention in education as it is more broadly conceived, educators have found ways to incorporate creativity and artistic expression into the experiential activities that they facilitate for students. Yet, theatre has remained a relatively unrecognized and under-utilized tool for this kind of teaching and learning.

The relationship between theatre and lived experiences is perhaps more difficult for those not directly involved in theatrical training to conceive.

After all, isn’t theatre precisely about the “imaginative constructions” of artists being created and performed for an audience? Is it not one of the central goals of a theatrical event to transport even those members of the audience who have never lived the experiences onstage into an encounter “as though they had been there themselves”? Those who have spent time training in theatre will be familiar with the instructions to live rich, observant lives in order that they might draw on their encounters, “analogous emotional experiences” in Sonia Moore’s terminology, in order to bring a depth and “groundedness” into performances. As Guillermo Verdecchia explains, “Surely, the task of the theatre – or one of the tasks – is to reflect, in various ways, the reality we live [5].” The actor’s lived experiences therefore become the primary research that informs every aspect of their work. In bringing this to a broader educational context, Dorothy Heathcote explains that Drama in Education can “[b]uild on pupils’ past experiences and give them a deeper knowledge not just of themselves but of what it is to be human, as well as an understanding of the society they live in and its past, present and future [2].”

### 4. Contribution to Knowledge

In order to make education more meaningful and relevant, many environmental educators and scholars, like Heathcote, have highlighted the need to connect learning to students’ previous and current lived experiences outside of the classroom. Heathcote’s ideas of the development of an understanding of what it means to be human, as well as a connection to the past, present and future of a place, are also significant imperatives for many environmental educators. The discussion of past, present and future is also important in the context of Indigenous education. It is recognized that there is much to be learned from the ways in which the ancestors related to the land, in order to exist in ways that take into account the well-being of the future seven generations.

### 5. Conclusion and Future Work

The reader can thus begin to see that environmental, Indigenous and theatrical educations all have a relationship to the kind of learning that occurs through lived experience. In addition, considerations of lived experience pinpoint areas in which these three contexts overlap and intersect with one another. Though this is only a small piece of the larger picture which indicates that Indigenous Knowledges, theatre and environmental education are interconnected and may be mutually beneficial, it is the author’s hope that this paper will pique the interest of other environmental educators to begin to consider the applicability of these disciplinary

concepts to their own teaching strategies. A more in-depth consideration of these topics can be found in the author's forthcoming thesis document.

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# Life Self-fulfillment of a Human Being from the Point of Systemic Anthropological Psychology: New Glimpse on Development of Human Resources

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## Abstract

*The problem of transition from the economic efficiency to the social one has been actualized in the modern society. It is noted that the methodological grounding for solving the issues on human resources development is the systemic anthropological psychology as a new scientific trend reflecting the trends of psychologic science development at the modern stage. It is revealed that the sustainable development of the society is possible subject to conditions for life self-fulfillment of a human being growing within the space of capabilities and allowing for enlarging the limits of a new life standard.*

## 1. Introduction

The modern period is considered as the epoch for innovative social development, while participation in the latter refers to the transforming activity of a human being resulting in the new quality of life that brings competition at the level of ideology, economy and social reorganizations in the society. Therefore, the issues related to the transition to the sustainable development as a rejection of a consumption paradigm in favour of spiritual values paradigm in the conditions of optimized consumption that proves the sustainable tendency of a society's transition to the post-industrial environment.

In these conditions, innovation activity is no longer a prerogative of specific people and encompasses all levels of production.

In an industrial society the capital was mainly understood as financial assets invested in manufacture and bringing in the additional income ("self-expanding value"), while today more often we find the reference to the human capital or resource the content of which proves that a human being is a strategic resource of any company as well a basis of its competitiveness. Therefore, the accent from the traditional term "economic efficiency" shifts onto a new one, "social efficiency" defining the possibility of personal self-

realization in a labour activity. It is understood that a socially effective one can be the innovative personality who is the precondition of the economic growth strengthening as well as that of the driving force for business and capital accumulation, improvement in life quality since it promotes generation of self-supported changes which constantly revolutionize life.

The result of such changes in a society is the expansion of the scientific conceptual tools that reveal the variety of human resources in a content-rich way as non-realized possibilities which require their realization. One of such concepts is "life self-fulfillment" of a human being.

The reference to concept of "life self-fulfillment" of a human being is connected also with the fact that issues on formation of the actually human in a human being and mechanisms of human being formation which are solved by modern psychological science is a question on self-fulfillment of a human being as a way of a presentation of oneself to the world and through this opening new possibilities for oneself. The paradigm being formed in a psychological science and characterized with a systemic redefining the subject of the science and leading researchers to a human being as a self-fulfilled system explains the designation of the psychic in a human being formation through comprehension of mission and designation of a human being as a higher system defining "from above" the possibilities of psycho and its role in self-fulfillment processes.

Thus, the understanding of a human being according to anthropological views of a psychological science allows to come to a problem of its (human being's) self-fulfillment reflecting internal tendency of a science development, its anthropologization as a display of regularities and the mechanisms providing progressive development of psychological ideas due to which the possibilities for researching space-time spaces of a human being's real life are disclosed.

## 2. Related Work

The variety and range of publications on the theme of vital self-fulfillment of a human being can be considered as display of the internal tendency for the science development revealing new possibilities for researchers. V. E. Klochko notes that “the anthropologization of psychological knowledge is already seen as the tendency, but this tendency is not understood yet as expression of regularities that define self-movement of psychological knowledge as well as mechanisms that provide science self-development as progressive (“forward” and “upright”) movements of a psychological thought” [1].

Taking the tendency of the psychological science development into account contributes to the resolution of the contradiction formed in psychologists’ anthropological cognition, i.e. between two alternative orientations: 1) understanding the ordered form of human life as aspiration to the order; 2) life realization as developing topological way. We consider that in the first case the concept of self-fulfillment of a human being approaches ideas on self-organizing processes in the living systems that result in self-change of a human being in the course of life acts. The second orientation as per its content comes nearer to the ideas on subjective reality generated by a human being in interaction with the world in its space-time (chronotopical) display. The contradiction can be resolved through the understanding of a human being within the context of anthropological psychology as an open phenomenon that constantly and newly defines itself, solving a problem “on value” allowing to carry out the possibility of a choice for further way towards the complication – formation of the Human in a Human being. Therefore, the self-fulfillment of a human being considered under actually anthropological point of view displays one of possible variants of anthropologization of psychological ideas realization of which makes the theoretical redefinition of a science subject objective.

The idea of considering a life self-fulfillment of a human being from a position of anthropological psychology is prepared by historical development of a psychological science and finds reflection in theories and the provisions realizing “breakthroughs” to a new ideal of rationality and specifying the generating interaction of a human being with environment the effects of which are revealed in finding own multidimensional world, living world, living space in which there is a self-fulfillment of a human being. Such enrichment of a psychological science in respect of anthropological ideas is considered by us as “a future challenge” on which the possibility to answer in the present is prepared by last achievements of a science.

Among the main principles of systemic anthropological psychology the special place is occupied by the principle of systemic determination allowing to make objective the psychological new formations that set concrete directions of a human being self-realization acting as the form of life self-fulfillment. Systemic determination having arisen in a counterbalance to linear determination, having endured long period of its understanding as a set of various determinants causing phenomenon development is understood within a context of post-nonclassical ideas as a principle providing “the understanding of the nature of the free activity arising beyond utilitarian necessity” [2]. The principle gains special meaning in the conditions of explaining the self-determination of a human being as an open self-organized system and assumes that “in the process of interaction between the subject and the object, a new reality is generated that is supersensual, ... i.e. systemic and characterizing the whole system the product of which it is” [1].

The principle of the whole human being reveals itself along with the principle of system determination and allows to “take” a human being “in the unity with that part of the objective world which makes its (a human being’s) reality possessing features of a reality and concreteness in which a human being lives and operates, and which the latter forms in the process of activities replacing each other and realizing the systems of life relations” [3]. It is a question not of separate displays of human essence but of an ontologic and maximally complete idea of a human being’s life created in the course of his life since “initially a human being in the world is given as a thing, as the empirical fact which does not have ways for maintaining integrity” [4] which in the course of a life performs “collecting oneself in whole, integrity” [4], providing the self-phenomenon and then self-presentation to the world. M.K.Mamardashvili noted that “we have two poles: living that is ordered in that sense that – living through extracts from regularities and laws, and on the other hand, we have dispersion and disintegration – lifeless” [5]. Developing his idea within the context of a principle of a complete human being it is possible to concretize the aspiration to integrity, systemizing, self-organizing is a life developing in space and time, “displaying” ontologic life in such a way that “it would be possible to refer to the case everywhere, but not the case that has passed us everywhere possible, but the case which was to the benefit for us and proved productive” [5]. This ontologic movement to integrity requires “work, it is not a gift, it is a project” [6]. The disorder is always set, therefore, the order requires an explanation and effort, reaching the order can become the work of all life. This is how the formation of the Most Human in the Human being is carried out.

Continuous enriching of a human being's integrity performed by the latter is provided by one more principle formulated by V. E. Klochko, i.e. a generation principle: any really performed interaction is not only the basis for self-reflection of the parties participating in interaction, but also their mutual transaction leading to generation of a new quality. The author has in view that generating effect which results from interaction of identical contrasts. For post-nonclassical researches the given principle has special value as it reveals the mechanism of complication of the system organization: "There where conformity is detected interaction becomes inevitable; it reveals the relation of the co-operating parties which existed before interaction, was revealed in it and fixed by the created "cumulative" product which changed both system and environment" [3]. M. K. Mamardashvili remarks that if there were no such a "tool" as conformity our life would have been chaos, and our mentality could have been characterized as disintegration and pathology [5]. Due to conformity a human being increases the order, systemic nature and integrity expanding own life space – space of those value-semantic components of the world image of a human being. The degree of their realization sets the range of possibilities, thus the width of new space found by a human being is set. This is how continuous "self-generation" of a human being is performed.

It is possible to state that at the crossing of all the above mentioned principles the life self-fulfillment of a human being can be discussed as the latter acts as generating effect of interaction of a whole psychological system with its life space possessing features of conformity to the given system characterizing all system and being its product. The central and grounding mindset adequate to views of systemic anthropological psychology and characterizing given principles is the belief in boundless possibilities of a human being which define evolution of development of system.

Referring to a problem of evolutionary movement A. Bergson in his work "Creative evolution" noted that life is characterized by self-creation possibility, result of continuous creation of oneself (this property is specially focused by the scientist as the progress proceeding continuously remains invisible in each separate time period but it is revealed when "the past presses the present and squeezes out from it the new form incommensurable with the previous") [7]. According to the author, the life is such a result which changes each time under influence of the newly obtained forms of this life: if he (a human being) follows "the natural direction then it will be development in the form of tension, continuous creativity and free activity" (the author names this orderliness a living one) and if he turns back there is

other form of an order – inertia and automatism. It is necessary to understand that free activity underlies life self-fulfillment.

It is the systemic anthropological psychology that acts as methodological basis of the research since processes of life self-fulfillment of a human being can be comprehended only within the context of a whole human being that "is included in diverse and various communications and relations with a reality but lives and operates as a unity" [8].

### 3. Analysis of Findings

A systemically important basis of the work is the understanding of a human being as a complex self-organized system which mode of existence is the self-development providing progress of a human being in a direction of complication of a psychological system [2]. Thus, the attribute "life" bears special loading specifying the extent of "place-time" developing self-realization (it is not the one-stage act of own potential realization!) where a human being makes effort on the ways to oneself opening "human" spaces in oneself and developing one's resource.

The problematic nature of life self-fulfillment as a display of self-organized psychological system consists of that "the self-organizational" cognition of scientists-psychologists has not developed unified approaches to understanding the phenomena of psychological reality; due to that the "range" of self-organizational mechanisms for systems development is wide enough: from adaptation to actually self-organizing. Ideas on a human being as the psycho carrier and psycho considered "adaptation organ" [9] cannot lead the science to a problematic space for consideration of a human being as a self-organized system. Remaining in space of classical ideas, the psycho successfully manages in acts of adaptation to changing life conditions without participation of a human being. Ideas on a human being as the subject of own life activity with possibilities of self-control mark human being's activity as a necessary condition of his (self) development but "do not go beyond" the post-nonclassical ideal of rationality. Claiming research of phenomenon in human being's "life self-fulfillment" within the context of systemic anthropological ideas, it is necessary to come to space of a post-nonclassical ideal of the rationality providing understanding of a human being as a self-organized system. Moreover, statement of a problem requires applying such criterion of the analysis which would allow to go beyond a studied phenomenon: life self-fulfillment of a human being is a product of formation of the most complex self-organized systems – "a human being", views on the latter result in the choice of ideas through which "this product" can be considered.

Having defined a human being as a self-organized system it is possible to outline the process of manufacture, generation by the system of the new which is immediately included into further determination of the system self-organization as a form in which its development is carried out. To understand life self-fulfillment of a human being as a product of the latter and his life means possibility to understand and the human being itself is the most mysterious event of the world. In turn, recognizing living subjectivity as “the concrete unique general” - living life of reality, concept “life” fills the life activity of a human being with the real cultural-historical content. That is why in each separate act, action, life activity and life creation a human being’s life self-fulfillment reveals its essential features and increases them in an incessant vital stream where a human being “feels oneself a part of this mighty impulse of life” [10] embodying in process of life the creativity, continuous formation, the vast variety as that infinite number of freedom degrees that defines boundless possibilities of a human being. In the point of overlapping of possibility of a human being and reality conditions is the starting point for the “successful life” of a human being as a guarantee of achieving the purpose in realization of each action. That is why achieving the purpose of a human being gives the latter (a human being) the greatest subjective satisfaction that covers success of life self-fulfillment. Productivity of a human being’s self-realization depends on many psychological qualities of the latter, developing which increases the efficiency, masters various forms of self-realization accompanied by different levels of expressiveness of aspiration to personal growth and development, characteristics of motivation and needs spheres and mindsets of a human being. Along with personal qualities among the factors promoting effective self-realization, it is possible to emphasize a high social status and an educational level expanding living space of a human being.

All these indicators, in our opinion, have a direct reference to life self-fulfillment of a human being, i.e. balancing between order and chaos which I. Prigozhin named movement “from life to formation and back” [11] when the accent is shifted from balance position to instability condition where the structure is generated and reconstructed. This single moment of fixation to balance, to stability along with an openness which “breaks” the established rules is related to the life self-fulfillment of a human being as specially built relation with the world around pointing on the issue regarding the fact whether the life is that a human being (under the formula “I live”) performs or it is something that is performed in a human being (under the formula “I am lived”). Being a mean for realization of the vital project, life self-fulfillment acts as the special value

allowing setting frameworks to the new life standard contextually entering wider problematic field as compared to issues of social and economic functioning of a society. Since in life self-fulfillment the inherent form of transition of possibility into the reality proves special, only to a human being, and as a source of such behaviour “intense possibility” [9] consideration of the given phenomenon and its “consequences” can go in a direction of the human life content. It is a question not so much of a basis of a new economic coil, but of the reference to a human being which once again becomes “a measure of all things” [12], acting simultaneously as the carrier of this life standard and the figure focused on creation of life conditions adequate to this standard and providing to it a wide spectrum of possibilities.

Since a human being acts as the initiator of movement of all self-organized system and in this movement reveals new possibilities, life self-fulfillment of a human being each time is a new “transformed form” [6] being a product of the system as a whole. Human being as opened self-organized system acts as the reason of selective interaction with the environment and, accordingly, the reason of self-realization which presupposes freedom of a human being in a choice of possibilities. Therefore, self-realization of a human being in the course of life is always a change, and change is the result of struggle putting human life in order. We find the same point of view in M. K. Mamardashvili’s works: “without me there will be no order in this world” [5]. In addition, responsibility for the order presence in the world is born by a human being.

True life self-fulfillment for a human being is a situation of transfer of possibility into the reality in such a manner that it acts for a human being as realization of responsible possibility as a necessity. The degree of responsibility in relation to oneself, to own life world, own formation as to self-realization reveals the idea of heterostatic system developments, the “possibility of transformation of the reality – necessity of transformation – the new (transformed) reality” [9] which leads the system to the new standard of living shown in the course of life self-fulfillment of a human being.

#### 4. Conclusion

Conducting research it seemed to us topical to find proof that the orientation of life self-fulfillment as development of a human resource in the course of life coincides with how it was defined by L. S. Vygotsky with reference to development of the higher mental functions and a human being as their systemically important basis: “The whole development is that function development goes from *me* to *I*” [13]. In this view of a problem related to occurrence, existence,



transformation, development and self-development of a human being in unity with the world, its individual life strategy act defined in relation to the chosen strategy of life potential realization [14]. Considering that the economy in a modern phase gets the form of an anthrop aligned, innovative, intellectual one, the use of systemic anthropological psychology as a methodological framework of theoretical understanding of a phenomenon in “life self-fulfillment” human being is adequate to the social order [15]. In the conditions of dynamically developing society, transition from situations of problems management to situations of risks management the life potential of a human being focused on improving activity in relation to the surrounding reality and oneself is a basis of new representations about quality of human life, about features of the innovative potential, displays of innovative behaviour which strengthen requirement of understanding that there is “a human being” and that there is “life” stating the issues connected with the process of life self-fulfillment.

Thus, within the limits of the systemic anthropological psychology consistently developing ideas of cultural-historical psychology in a post-nonclassical key, life self-fulfillment of a human being acts as the process mechanism of which is a transition of possibilities to the reality, that is transition of a human resource to the potentialities leading a human being to limits of its cash life in those points, sectors, segments of the life world in which environment answers its possibilities with occurrence of new value and semantic measurements.

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## **Session 22: Higher Education**

Higher Education Models in Jordan: Differences in Quality Outcome Measured through Faculties Perceptions

(Atif bin Tareef, Mallouh Al-Slaihat)

The Challenge of Investigating Academic Understanding and Practice of Formative Assessment in Higher Education: A Thematic Interpretation of Diverse Communities of Practice

(Jean Laight, Mandy Asghar, Avril Aslett-Bentley)

The Role of Feedback in Enhancing Students Learning at Graduate Level

(Majda Ibrahim Aljaroudi)

Comparison of Quality Assurance Systems in Higher Education

A Survey on Selected Higher Education Systems and Expert Interviews

(Andrea Bernhard)

### **Invited Abstract**

Value Consideration for Higher Education by Undergraduates in Public and Private Universities in Nigeria

(Anne I. Fabiyi, Simeon A. Oladipo, Benedict Emunemu)

# Higher Education Models in Jordan: Differences in Quality Outcome Measured through Faculties Perceptions

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## Abstract

*The higher education is an important component of a country's education system and is crucial for ensuring development and progress. Among its key functions is to produce and provide advanced knowledge, as well as to ensure appropriate training for specialized medium and high-ranking managers in the public and private sector. Research in higher education represents many of a country's aspiration for progress and building a better future.*

## 1. Introduction

The Higher Education was established in Jordan in 1962 leading to the creation of the University of Jordan. Since then the numbers of universities and students attending has steadily escalated. There are now 11 public universities and approximately 80% of high school graduates enter higher education in some form. Within the universities, in addition to academic faculties and departments, these are numerous specialized institutions, centers and units which carry out and support research and training. In 1990, a new law on higher education was issued which opened the door to new private universities. At present, there are (16) private universities and another three under construction. Research combined with postgraduate studies is conducted at universities while topically focused research generally without a training element is conducted by Ministerial and Governmental research centers. There are very few private research centers in Jordan.

## 2. Research Rationale

This study aimed to identify the differences in quality outcome measured through faculty's perception in Jordanian higher education institutions. The long term goal of this project is to increase awareness among faculty members, researchers and educational leaders regarding the necessity of improving research planning and strategies, professional development opportunities, working conditions, research financing, private sector

support, research ethics and effectiveness and to increase the number of qualified researchers.

The main questions of the study are:

- What is the democracy ideals on education in higher education institutions in Jordan as perceived by the deans and vice deans of the research-oriented departments?
- What are kind of teaching methods used in Jordanian universities as perceived by the deans and vice deans of research-oriented departments?
- Do statistically significance differences exist at ( $\alpha \leq 0.05$ ) in the importance of research based on the type of institution (public or private)?
- Do statistically significance differences exist at ( $\alpha \leq 0.05$ ) in the method of teaching based on the type of institution (public or private)?

Institutional rating are positively influenced by arrange of factors such as student admission selectivity and graduation rates and faculty scholarship outcomes (research funds, research publications and consultancy rates).

## 3. Limitations of the Study

An interview and survey were conducted to define the limitations of the study. It was limited to the faculty members of the college of education at the Universities in Jordan. The 27 higher education institutions (10 public and 17 private) were involved in the survey that was conducted for this research. The survey was carried during the 2009-2010 academic year. It was limited to the deans and vice deans of the scientific research departments.

## 3. Conclusion

Teaching effectiveness has been found to be multidimensional in other word, there are different to effective teaching. From the perspective of faculty members, effective teaching entails the development of critical thinking, the enhancement of a deep understanding of principles, the establishment of links between theory and practices and acquisition of lifelong learning skills [1]. In most universities, however, the prevailing learning approach is the lecture approach.

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# The Challenge of Investigating Academic Understanding and Practice of Formative Assessment in Higher Education: A Thematic Interpretation of Diverse Communities of Practice

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## Abstract

*Building on previous collaborative research in a case study institution, this paper continues to investigate data from in-depth, semi-structured interviews with 25 lecturers, spanning a wide range of disciplines and professions. Having analysed earlier interviews using Ashworth's lifeworld lens, further data analysis is presented which utilises NVIVO8a to develop a contrasting thematic approach [1]. Findings suggest that the discourse of Formative Assessment is profoundly shaped by the cultural context of the courses and their communities of practice. It appears within disciplines that internal practices are also influenced by broader professional and regulatory environments. Consequently, understanding and approaches to Formative Assessment have been found to vary across the institution. Critical reflection on the work provides a basis for discussion of the implications for future developments in theory, research and practice.*

## 1. Introduction

This paper builds on the work of a previous collaborative research team into how academics perceive and utilise formative assessment in practice [2], [6], [12]. The present paper uses thematic analysis of data obtained from in-depth, semi-structured interviews about formative assessment with 25 lecturers, spanning a wide range of disciplines and professions, across the case study university.

Formative assessment has been reviewed in recent years by Black and Wiliam and by Gauntlett [5], [8]. Currently there is a strong driver in Higher Education to support the value of formative assessment in enhancing student learning. This is strongly influenced by student dissatisfaction about feedback, derived largely from the results of recent national student surveys. Policy changes in the recent past, such as increased student numbers and modularisation have contributed to reducing opportunities to use formative assessment in practice [18].

## 2. Rationale and concepts

Formative assessment can be considered to be 'a slippery concept' in relation to understandings and communities of practice [2]. A considerable debate exists in the literature about the nature of formative assessment and its role in Higher Education. Race acknowledges formative assessment to be 'highly contested' and cites the working definition of Pickford and Brown (quoting Cowie and Bell,) as: 'the process ...used to recognise and respond to student learning in order to enhance learning during the learning' [14]. However, feedback associated with formative assessment often occurs *after* the learning, so effective *feed forward* is important to strengthen the link with overall duration, depth and extent of learning. The definition of Black and Wiliam encompasses this as '... all those activities undertaken by teachers and /or their students which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged', supporting the view that formative assessment builds towards further learning [5]. In contrast, summative assessment normally occurs at the end of an episode of learning and is not necessarily accompanied by either qualitative feedback or clearly identified feed forward. However, Taras sees them as closely inter-related [16], [17]. Yorke meanwhile identifies informal and formal classifications of formative assessment [19]. Approaches to the present context of assessment, based on socio-constructivism, encourage its integration to promote a culture of learning, in opposition to behaviourist theories which tend to separate assessment from learning [7]. The importance of the assessment rationale in improving practice has been identified by Leathwood, and recent work favours the socio-constructivist interpretations, as cited in the work of both Pryor and Crossouard, and of James [10], [13], [9]. Yorke has identified the need for engagement in qualitative research to deepen understandings and develop practice [19]. Formative Assessment is therefore a key, contemporary, controversial concept with potential for enhancing student learning and reducing attrition rates. It justifies further investigation and debate both in terms of perceptions and application in present practice [3].

### 3. Methodology

To enhance perspectives on previous work of Asghar *et al*, which used a phenomenological methodology based on the lifeworld lens of Ashworth, current analysis uses NVIVO8 to thematically analyse the transcribed interviews from a purposive sample of academics [2], [1]. Ethical approval was already in place and an ethical approach used throughout. Working collaboratively the following ‘nodes’, or themes (with additional sub themes), were identified in the earlier stages of analysis and then used to thematically code the remaining transcripts with on-going re-adjustments where necessary:

- Assessment.
- Communities of practice
- Dangerous discomfort
- Definition of formative assessment
- Diversity of students
- Emotion
- Empathy
- Evidence
- FA and Pressure
- Feedback
- Formative assessment affecting critical thinking
- Gentleness safe soft
- Issues with size of groups
- Learning philosophy
- Marks equals value
- Modelling
- Power
- Reflecting on your own experience
- Retention
- Role of HE teaching experience
- Self efficacy
- Staff identity
- Student engagement
- Student pressure re marks
- Value

### 4. Findings

Based on the above approach a small snapshot of our on-going findings is reported below in relation to the project for 3 of the participants from different disciplines, 2 female (Amber, from Education and Caroline, from Youth and Community) and 1 male (James from Design). These and related findings will be presented and debated with the paper.

### 5. Project

There are clear relationships with the theoretical debate provided above and its implications for

current practice as demonstrated by the following examples:

Amber on student engagement:

*That we feel that if we leave everything to a summative assessment then the students are not as engaged.*

Amber, who is in Education, has identified an important short coming of summative assessment and recognises the value of formative assessment in enhancing student engagement (and hence learning)

Amber on self efficacy:

*Yes it is the thought of it, yes the thought of it is not but once they have done it and usually doing that debriefing period afterwards when they have got their written feedback that typically their reaction is of relief.*

Here Amber identifies the process involved in development of self-efficacy through the use of formative assessment. Feed forward is not explicit here but it is possible to see how this could be linked to the process described.

Both examples from Amber demonstrate a student-centred focus, but also are very much concerned with the learning process, which appears to reflect her discipline.

Caroline on self efficacy

*I mean I was a teacher for many years as well, so training is kind of a real interest to me and not just imparting skills because it raises so much sort of self esteem and self confidence in students when they get involved in it*

Caroline provides a different perspective from Amber, but is also student-centred and appreciates the role of formative assessment in building self-esteem and self confidence in order to result in self-efficacy. Interestingly though, Caroline was a teacher in the past, but in line with her current discipline (Youth & Community) she demonstrates her interest in enabling self-efficacy to support achievement.

James re feedback:

*I think the nature of what I deliver on these courses means that the feedback loop is quite a lot slower than the studio stuff. The studio stuff, you know you could be there with the students in a workshop or in the studio or whatever talking about what they have done, talking about this drawing and so on and there's a kind of immediate feedback link, you know and they could say well what if I try this then and that's sort of learning in action and all that sort of thing.*

James illustrates different examples of the use of formative feedback, including very informal and spontaneous feedback. He also identifies the importance of timing (and in particular speed in the practical setting for his discipline of Design).

James re definition of formative assessment:

*Formative assessment is like, there is an element of it's always about you know what you are moving towards, its always about the future.*

Here James is referring, in his own words, to feed forward and how formative assessment influences future learning. His discipline of design is also mostly very future focused.

These extracts illustrate examples of the importance interviewees attach to formative assessment and student engagement in it from different perspectives.

## 6. Discussion

The above snapshot provides a very limited picture of overall findings (which will be described in more detail in the presentation) but suggests that the discourse of formative assessment is profoundly shaped by the cultural context of the courses and their communities of practice. Possibly there may be some gender influences worthy of consideration across the full range of findings. It appears that within disciplines internal practices are also influenced by broader professional and regulatory environments.

## 7. Conclusion

In conclusion understanding and approaches to formative assessment have been found to vary across the institution, in keeping with 'signature pedagogies' described by Shulman [15]. There are interesting comparisons to be made with related researchers, for example McDowell *et al* [11]. Critical reflection on this piece of work raises debate on how to meet the challenges posed for the future development of formative assessment in relation to theoretical frameworks, research investigations and communities of academic practice.

## 8. Acknowledgements

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# The Role of Feedback in Enhancing Students Learning at Graduate Level

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## Abstract

*This study assures the importance and the role of feedback in enhancing students learning at graduate level. The study argues that it is the faculty obligation and responsibility to ensure that their students understand and comprehend discussed concepts. It is important that the instructor gets feedback from students as to the extent to which materials are understood. Also it is the obligation of the instructor to give feedback to guide students to perceive their misconceptions. Twenty nine participants were enrolled at the master level of educational administration program, college of Education, at King Saud University during the fall of 2009. The results revealed that : (a) Students benefits more when the educator introduces a feedback to the subject discussed.(b) Students benefits more when the educator gives them feedback on their papers,(c) It is important for the students to prepare for the concepts discussed in the lecture.*

## 1. Introduction

A number of writers argued that feedback is under-conceptualized in the theoretical literature in HE and elsewhere, and that this makes it difficult to design effective feedback practices or to evaluate their effectiveness [1].

Trigwell and colleagues discuss the adoption of student-focused approaches to teaching in order to improve the quality of student learning. To engage students fully in the learning process and to encourage them to take responsibility for their own learning requires academic staff to make a shift from teaching to facilitating active learning [2].

This study is trying to prove that it is not difficult to design an effective feedback, and it is not enough to encourage students to participate in learning, but it is also the feedback an instructor provide on their submitted paper that allow them to enhance their learning.

## 2. Literature Review

From constructivist point of view, democratic atmosphere in classroom is mandatory—that is,

faculty should respects students' willingness, efforts, and ability to learn. However, without guidance and feedback students would fail the proper aim of learning and teaching. Students should obtain their opportunity to learn in an environment that takes factor of emotions, peers interaction, brainstorming into consideration. Students have the right to know the extent to which they have achieved the goal they were supposed to, through the feedback their teacher will give to assure them that what they have done was ok.

A lot of studies had been managed to investigate the effectiveness of feedback most of them revealed the importance of using feedback as a tool to improve or correct. Feedback as a term in Education; mostly referred to as an information provided by an agent (e.g., teacher, peer, book, parent, self, experience) regarding aspects of one's performance or understanding [3].

Wikipedia define it as the way "students will often look up to instructors as experts in the field and take to heart most of the things instructors say". Thus, it is believed that spending a fair amount of time and effort thinking about how to respond to students may be a worthwhile time investment [4].

Feedback also, is some form of input on your work; it could come from supervisors, co-workers, or others you interact with. In some contexts it can be quite formal, but it can take many forms – it can be something as simple as a short verbal comment. "A teacher or parent can provide corrective information, a peer can provide an alternative strategy, a book can provide information to clarify ideas, a parent can provide encouragement, and a learner can look up the answer to evaluate the correctness of a response. Feedback thus is a "consequence" of performance [5].

Butler and Winn noted that feedback occur when "students generate internal feedback as they monitor their engagement with learning activities and tasks and assess progress towards goals, produce better feedback or are more able to use the feedback they generate to achieve their desired goals" [6].

Taylor suggested that "it should be the objective of the educator in a classroom to assess the effectiveness of their teaching by evaluating their students effectively by first observing the students

behavior, academic work, attitude and relationships within the school environment” [7].

Nicol suggests that feedback is “information about how the student's present state (of learning and performance) relates to the goals and standard” assigned by the instructor [8].

In a review article, Black and Wiliam showed that feedback resulted in positive benefits on learning and achievement across all content areas, knowledge and skill types and levels of education [9]. One of the most underpinning of the Black and Wiliam's review is that by Sadler [10]. Sadler identified three conditions necessary for students to benefit from feedback. The conditions are as follows:

- Possess a concept of the goal/standard or reference level being aimed for.
- Compare the actual (or current) level of performance with that goal or standard.
- Engage in appropriate action which leads to some closure of the gap.

For many writers, these elements have led to the conclusion that as well as focusing on the quality of the feedback messages, teachers should focus their effort on strengthening the skills of self-assessment in their students.

### 3. Methodology

This study adopted descriptive approach and accomplished during 11 weeks in three sessions.

The first session: the instructor taught the students through discussion group, but guided them with a PowerPoint presentation to facilitate modification of concepts. Preparation and written papers were submitted before group discussion and individual feedback was provided on each document. The correction of the papers included showing the weaknesses and strength in their papers. They have been told to read it, correct it and bring it back for the instructor to look at it again.

The second session: the instructor taught the students through discussion group but did not give them any feedback through PowerPoint or correct their papers which they have been told that it is up to them to write it or not.

The third session: the instructor left the students to take the stand by role and discuss their concepts and understanding of the subject they prepared, and gave the other students the opportunity to interfere if they have a different idea, after that the instructor took their papers.

#### 3.1. Study Assumptions

The study seeks answers to the following assumptions:

1. Will students benefit more when the instructor introduces a feedback to the subject discussed?

2. Will students benefit more when the instructor provides written feedback on their papers?

3. Is it important for students to prepare for the topics to be discussed to enhance their learning?

#### 3.2. Data collection

A Questionnaire about the importance of feedback was collected from 29 students. The questionnaire consisted of two parts: 1) The way feedback was introduced, and 2) its importance.

A. How the feedback was introduced during the lectures by the instructor. The following questions were asked about:

1. The instructor was assured that the students understood and comprehended the feedback given to them.
2. The instructor explained in clear words the relationship between the students work and the feedback given to them.
3. The instructor makes sure that the students understand the goal they are aiming to achieve.
4. Feedback included all means of communication oral and written and body language.
5. The instructor clarified the rules needed to achieve the desired goal.
6. The instructor makes sure to ask examples of substances suitable for all levels and ages.
7. The instructor use of feedback increased the level of motivation to learn/
8. The instructor explanation and analysis of information provided was sufficient.
9. The delay in giving feedback made me worried.
10. Feedback has been characterized by continuity.
11. Positive words had an influence on my behavior.
12. Freedom to express an opinion helped to consolidate democratic practices.

B. The importance of feedback. Ten questions were about:

1. Feedback provided me with the results achieved.
2. Feedback indicates the error and correct in achieving the desired goal.
3. Feedback demonstrates what I have succeeded in learning, and what I did not.
4. Feedback is the most important fruits of assessment.
5. Feedback changed my behavior after knowing the consequences of my old one.
6. Feedback elicited motivation to change.
7. Feedback steered my energy towards learning.
8. Feedback helped affirming the information given to me.
9. Worked to raise the level of performance in subsequent educational tasks.
10. I am satisfied that the degree which I obtained was the result of my performance.

## 4. Finding and Results

Analysis of participants' responses indicated that 90% of participants strongly emphasized hypotheses number one, while 88% agreed on hypotheses number two. This study assured that students' benefits more when the teacher introduces a feedback to the subject discussed.

About 60% of participants agreed upon the importance of preparing for the subjects studied, because it enhances their learning.

## 5. Conclusion

In conclusion, center of effective University teaching in Northeastern University states that using classroom assessment will prove benefits to both students and faculty. It seems pretty intuitive that receiving feedback gives a person a clearer idea of how well they are doing the work and how they might improve. Obviously in some cases, it is pretty straightforward, if you have done a task or not, but in much work there is some room for choice in how or what you do, and feedback is one way of showing this [11].

Giving the results the study reached, we can say that feedback given by the instructor as a kind of assessment proved to be working in making students understand the areas of their strengths and weaknesses. Feedback also gave them the acceptance of the marks given to them, because they understood their mistakes.

When weighing assessment options, it is obvious that it is both students and instructors' responsibility to work together for the benefit of the goal of education. From the experience and results of the study, students do find it hard and difficult to do assignments and review it at classroom with their instructor, because that will double their efforts, but they found out that it is for their benefit, because it helps them clarifying any ambiguity, and facilitate their understanding and measurement of their subjects. It also gave them satisfaction, because they understood their mistakes and got feedback about it.

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# Comparison of Quality Assurance Systems in Higher Education

## A Survey on Selected Higher Education Systems and Expert Interviews

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### Abstract

*Transparency and comparability of higher education especially in terms of their academic programmes are important issues for today's working environment. Employers are looking for the best staff and students want to have a recognised degree for a national and a global labour market. Strict quality criteria have to assure the effectiveness and comparability of academic programmes for the individual student, the scientific community as well as for the market and industry. This paper is an overview of my doctoral thesis which outlines examples of selected OECD countries (Austria, Germany, Finland, the United Kingdom, the United States and Canada) with their different ways to implement a quality assurance system. A comprehensive overview of all these nations together with expert interviews will show the key objectives to transform and improve their quality assurance systems. The focus is laid on the development of such a system as well as on the different challenges these countries are facing.*

### 1. Introduction

Higher education research is a quite new field of interest and can be seen as a multidisciplinary subject. Researchers from different fields of study are interested in learning about the complexity of higher education. They are looking at higher education from different angles with an educational, management and/or social science approach. This thesis is based on educational, historical, social as well as economic aspects of higher education in the context of quality assurance.

### 2. Research objectives

In times of mass higher education and a high complexity of higher education systems quality assurance gains a great importance. Higher education institutions are confronted with tremendous tensions and transformation processes – they have to react quickly to educational needs of a fast-changing

society and have to assert one's position with other higher education providers.

A theoretical framework concentrates on the growth and diversification of higher education systems (concepts of massification and diversification), the increased emphasis of the market (privatisation of higher education) as well as the ongoing globalisation process [4, 6, 7]. These transformations show the diverse dynamics and highlight the need of quality assurance in higher education to enhance, improve and even maintain a quality-focused orientation [1].

Thus, a (nationally and internationally recognised) quality assurance system should be able to guarantee transparency and control of academic programmes and degrees. Nearly all over the world national and internationally-operating quality assurance agencies have been developed but with different approaches (internal or external procedures, accreditation vs. evaluations, quality audits etc.) [3].

A variety of country reports and comparative research projects on higher education issues have been carried out by international organisations, individual researchers or research teams with their different scientific background [2, 5, 8]. But what is missing are future scenarios of the ongoing transformation processes, a link between countries and their different approaches in quality assurance as well as possible solutions for higher education systems to establish a functioning system while still considering their cultural, social and economic diversity.

### 3. Methodology

The empirical part of this thesis focuses on six country reports which provide an overview of general features on their higher education system (facts and figures, governance and funding, reforms) on the one hand and picture a comprehensive description of different quality assurance mechanisms (development of quality assurance and their agency/agencies, ongoing discussions) on the other hand. To gain a deeper insight on prevailing discussion processes within these countries an interview and feedback process on the country reports from different higher education researchers, executive directors of quality assurance agencies or

representatives of ministries will be carried out (up to six experts per country). Qualitative interviews will be conducted via e-mail with both gathering feedback on the country reports concerning their correctness and asking further questions, as f.e., their opinion on the prevailing quality assurance system and possible future developments.

The expert interviews will be conducted in February 2010 and the various remarks of the experts will be taken into consideration in the comparative part of the thesis. After a qualitative data analysis of the experts' opinions the country reports will be adjusted and a comparison of the systems will be carried out. The expert interviews will provide the basis to show future developments on quality assurance and a possible way to implement a functioning quality assurance system.

#### 4. Expected outcomes

Quality assurance schemes have to be developed as necessary instruments to adjust higher education institutions to the ongoing transformation processes. The reports of the European countries are already completed and vast transition processes to develop new mechanisms and procedures to assure quality in their higher education systems have been figured out. Austria is on the way to put all three quality assurance agencies under one entity, Germany is emphasising on a new approach of system accreditation, whereas Finland and the United Kingdom are developing an audit system. It will be a great challenge to concentrate on countries outside the European Union and compare these countries in terms of their quality assurance system.

#### 5. Conclusion

Although there are lots of different national opinions and ways to implement a quality assurance system, there is a need and a will to cooperate

between this diversity while still keeping the individuality of the own country [2]. As the different systems are most of the time newly developed they should be able to adapt to changes and try to react quickly to the needs of our knowledge-based society. Quality assurance in higher education is not fully developed but still under construction!

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# Value Consideration for Higher Education by Undergraduates in Public and Private Universities in Nigeria

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## Invited Abstract

*The four research questions raised to guide the study focus on value factors, which are considered in terms of life skill acquisition, access to desired course of study, inclusiveness, aesthetic of school buildings, technology in the classroom, research collaboration, cultural integration and establishing important contacts that pay off later in life. Some students perceived that the value of higher education is worth every dime of its price, while others believe that high price may not mean high quality. With the expanding number of private universities in Nigeria, (bringing public/private ration to 1:7), this research is timely to ascertain what value Nigerian undergraduate place on private and public higher education. Descriptive research design was adopted and population constitutes undergraduates from four randomly selected public and private universities in Lagos and Ogun states of Nigeria. Structured questionnaire and interview were employed to solicit responses in the areas of values expressed in this research. Some of the results revealed that 63% of sampled undergraduates in public universities have preferred private university education and no known scholarship skill was available to cover tuition and accommodation. All sampled undergraduates did not differ in value express in life skill acquisition as both groups are optimistic of being ready for challenges of life after school. Among many proposition, educational institution leaders and policy makers are to encourage policy for private institution to provide cushion-effect for undergraduates.*

## **Session 23:                    Language Education**

English as a Dominant Language: Locating Foreign Language Teaching within Bourdieu's Framework of Capital  
(Jihyun Nam)

Improving Student Listening and Engagement for English Language Learners with Sound Field Amplification  
(Pamela Millett)

The Bee or not the Bee, That is the Question  
A Holistic Approach to Teaching in a TEFL Graduate Course in Iran  
(Mehdi Mahdaviniania, Ebrahim Zarinshoja)

Perception of the French Language and University Students Expectations  
(Christine H. Van Berten)

# English as a Dominant Language: Locating Foreign Language Teaching within Bourdieu's Framework of Capital

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## Abstract

*In the English as a second language (ESL) or English as a foreign language (EFL) context, native English speaking teachers are often given priority over non-native English speaking teachers because of nativeness. However, the advantage of native speaker status may not be powerful in the teaching of one's own language as a foreign language in an English speaking setting. If a foreign language teacher has to choose between teaching English as a foreign language in his or her own country and teaching his or her native language in a foreign country, specifically the US, what will influence the teacher in terms of power relations? This qualitative study explored how power relations might impact employment choices between teaching EFL in Korea and teaching Korean as a foreign language (KFL) in the US, specifically drawing on the forms of "capital" conceptualized by Bourdieu. An in-depth semi-structured interview with a Korean doctoral student in a US university who had taught both EFL in Korea and KFL in the US revealed that there is a strong possibility that the participant would choose English teaching when asked to choose between EFL teaching in Korea and KFL teaching in the US.*

## 1. Introduction

Whenever the researcher as a Korean hears the term "foreign languages," English automatically comes to mind first and then one of the following: Spanish, French, German, Chinese, Japanese, and Russian but not usually Arabic, Vietnamese, or Norwegian. Similarly, he often comes up with English teachers when encountering the term "foreign language teachers" through media such as newspapers or TV. Such reactions produced in my mind may be grounded in power relations among languages. Phillipson [1] argues that the dominance of English over other languages is "asserted and maintained by the establishment and continuous reconstitution of structural and cultural inequalities between English and other languages". In the same

fashion, the popular belief that English is a global language may not be naturally grounded but rather it may have been disseminated across the world by the dominant group so that the hegemony of English over other languages can be produced and reproduced.

The dominance of English is deeply ingrained in the foreign language teaching field so that it can be recognized as an international language across the world [2], [3]. It can be assumed, therefore, that if someone is asked to choose among various languages for a foreign language teaching job, he or she will be most likely to choose English because of the dominant power of English. Further, the dominance of English exists in English language teaching itself. Nonnative English-speaking (NNES) teachers have often been marginalized and perceived as inferior to native English-speaking (NES) teachers because of the dichotomy between native and nonnative speakers [4], [5], [6], [7]. In the ESL/EFL context, NNES applicants for English teaching jobs even try to use English names in order to avoid being identified as non-native speakers [5]. It is evident that the nativeness of native language teachers can be a great advantage, especially with respect to fluency and cultural knowledge [8].

In terms of power relations, two elements leading to the dominance of English and English teachers could be extracted from the arguments above, "the global spread of English" and "nativeness." It seems that they have interdependently contributed to constructing the current dominance of English, resulting in the situation in which many people across the world have struggled to have access to English, specifically "native" English. Is there then a situation in which the two elements conflict with each other? This inquiry provided a springboard for this study. If a foreign language teacher has to choose between teaching EFL in his or her own country and teaching his or her native language in a foreign country, specifically the US, what will influence the teacher in terms of power relations?

This paper tries to answer that inquiry. In what follows, the researcher will begin by identifying two critical lenses, theories of power and Bourdieu's forms of *capital*, through which the relation of a



participant to foreign language teaching is examined. He will then analyze interview data in terms of the forms of capital, followed by a discussion of the findings.

## 2. Power and English

On the surface there seems to be no connection between power and English but a closer look at both within a broader social, cultural, economic, and political domain allows us to be aware that there exists a strong interplay between the two concepts as Kachru [3] points out. Power can be divided into two categories in terms of its role. While power can serve as various forms of constraint on human action, it can contribute to making action possible. For example, Cummins [9] makes a distinction between *coercive* and *collaborative* power. Collaborative power enables the dominated group to be productively empowered, whereas coercive power is exercised by the dominant group to maintain the unequal distribution of resources by encouraging the dominated to accept the status quo.

In contrast, Foucault [10] suggests that power is exercised with intention and interferes with others' action mainly by making the dominated behave by themselves in the way that the dominant want rather than by threatening them with violence. Analyzing the link between power and knowledge, he claims that belief systems gain power when any particular views associated with the belief systems are acknowledged as common knowledge by more people. Further, he emphasizes that common knowledge comes to be considered as an undeniable truth and defines a particular way of seeing the world while forming hegemony of the dominant over the dominated.

According to Kashrus, Cummings, and Foucault's ideas about power, the dominance of English across the world may have been maintained and constructed by stakeholders benefiting from such dominance.. The belief that English is a global language is acknowledged as common knowledge and further a truth whereas the hegemony of English over other languages is constructed. In line with this, Pennycook [11] argues, "English threatens other languages, acts as a gatekeeper to positions of wealth and prestige within and between nations, and is the language through which much of the unequal distribution of wealth, resources, and knowledge operates".

## 3. Capital and ELT

In order to shed light on power, Bourdieu conceptualizes *capital* [12], [13]. He introduces four forms of capital: *economic*, *social*, *cultural*, and *symbolic* capital. Economic capital is referred to as the ability to have differential access to material goods. Social capital is one's ability to participate in

social network while Burt [14] considers it as "friends, colleagues, and more general contacts through whom you receive opportunities to use your financial and human capital". In addition, symbolic capital is referred to as the resources available to an individual such as honor, prestige, or recognition.

Bourdieu [12] explains that cultural capital is categorized into three forms. *Embodied* cultural capital is part of habitus such as ways of speaking or behaving that we internalize through socialization and education. Therefore, we come to learn embodied practices as well as cognitive skills at home or at school. *Objectified* cultural capital takes the form of cultural goods such as textbooks or materials which can be transferred from person to person. *Institutionalized* cultural capital encompasses the forms of credentials or certificates, for example, TOEFL scores and TESOL certificates. Embodied capital, furthermore, is often of little significance without being endorsed by institutionalized capital.

Bourdieu [15] argues that people try to maximize their capital because it is a source of power. The four forms of capital are closely interwoven while symbolic capital functions as an authoritative embodiment of value of the other three. In other words, the value of economic, social, or cultural capital is added to that of symbolic capital when any given object is valued. Capital is therefore something whose value can be different contingent on contexts.. Employing the forms of capital theorized by Bourdieu [12][13], Pennycook [16] points out that capital could give us a useful means to analyze social phenomena, for example, "the global position of English in terms of the problems posed by the global symbolic capital of English, the effects of the embodied linguistic/cultural capital of the native speaker, the power of the institutional linguistic/cultural capital of the TOEFL, and the draw of English because of the social and economic capital it promises".

To sum up, it is assumed that power works in two ways. Whereas the dominant group exercises power to make the dominated group accept their hegemonic ideologies, the latter struggles to maximize various forms of capital, sources of power, in order to obtain access to privileges of the former. When it comes to foreign language teachers, they are positioned within a context in which various forms of power are intertwined around foreign languages while either oppressed by such power or struggling to gain it.

The researcher conducted an interview with a doctoral student who taught both EFL in Korea but also Korean as a foreign language (KFL) in the US. The purpose of this study is to explore how power relations impact employment choices between EFL teaching in Korea and KFL teaching in the US, specifically drawing on the forms of capital conceptualized by Bourdieu [12], [13]. The research questions are

- What factors make a difference in the participant's choice for a job between EFL teaching in Korea and KFL teaching in the US?
- How is the difference illustrated in terms of the forms of capital?

#### 4. Method

An in-depth semi-structured interview was conducted with a participant who had both English and Korean teaching experience. Drawings were also used for data collection. Bourdieu's forms of capital were used as the primary method of analysis and the relationships among them were considered.

##### 4.1. A Participant

A Korean female doctoral student, who has been studying at a major Midwestern university in the US for two years, participated in the study. She is majoring in language education. She had ten years of English teaching experience including five years of teaching at Korean primary and secondary levels in private institutes, three years of teaching at a private secondary teacher training program, and two years of ESL teaching at a US community college. While only writing skills in the ESL program, she taught all four English skills of speaking, listening, reading and writing at both private programs. In other words, she spent eight and two years teaching in an EFL and an ESL context respectively. She also had one and a half years of Korean teaching experience in the US. She as an assistant instructor (AI) taught KFL at the same US university which she is pursuing her doctoral degree.

##### 4.2. Data Collection

The researcher conducted a semi-structured interview with the participant in one of the group study rooms located in the library at her university. The twelve interview questions were divided into two sections, English and Korean (see Figure 1). With the exception of one question about the participant's educational background, almost all of the questions were asked to identify what factors influenced the participant to choose between English and Korean teaching. The researcher tape-recorded the interview while the participant was responding to my interview questions in English. He also asked the participant to draw two pictures. One was about the relationship between English and Korean while the other was about comparing English in Korea and Korean in the US based on the participant's experience. The researcher used the drawings because he believes that drawings can be reliably and validly used in educational research as demonstrated by Haney, Russell and Bebell [17].

Interview Questions
<p><u>Background Information</u></p> <ul style="list-style-type: none"> <li>• Did you ever teach English and Korean? If so, whom, where, when, and how long respectively?</li> </ul>
<p><u>English</u></p> <ul style="list-style-type: none"> <li>• As far as I know, you received your MA degree in TESOL from a US university. Could I ask you why you wanted to pursue your MA TESOL degree in the US?</li> <li>• What does it mean to you as an English teacher or professor in Korea to receive an MA or a Ph.D. degree in the US?</li> <li>• Do you think that there is a difference between English teachers who received their degrees in Korea and in the US? If so, what is it?</li> <li>• In terms of popularity and value, where will you locate and rank English among all language-related subjects (majors) at Korean schools (universities)? Why?</li> <li>• In terms of popularity and value, where will you locate and rank English teachers (professors) among all language teachers (professors) at Korean schools (universities)? Why?</li> </ul>
<p><u>Korean</u></p> <ul style="list-style-type: none"> <li>• How satisfied have you been with your job as a Korean instructor at your US university? Why do you think so?</li> <li>• In terms of popularity and value, where will you be likely to locate and rank Korean among all language-related majors or programs at your US university? Why?</li> <li>• In terms of popularity and value, where might you locate and rank Korean instructors (professors) among all language instructors (professors) at your US university? Why?</li> <li>• Assume that you have the same pedagogical and content knowledge and skills in both English and Korean teaching. When you are asked to pick one between two teaching jobs, English and Korean teaching, at a US university, what would you like to pick? Why?</li> <li>• Assume that you have the same pedagogical and content knowledge and skills in both English and Korean teaching. When you are asked to pick one between two teaching jobs, English and Korean teaching, at a Korean university, what would you like to pick? Why?</li> <li>• Do you think that there is a difference between English teachers in Korea and Korean teachers in the US? If so, what is it? Why do you think such a difference exists?</li> </ul>

Figure 1. Interview Questions

##### 4.3. Data Analysis

The recorded interview data were transcribed verbatim in English before being carefully examined and coded. For coding the qualitative analysis software tool, *Atlas-ti*, was used. Coding took place in multiple processes. Through initial coding of the interview transcript, annotations were manually written during a process of reading line by line to clarify each meaning intended by the participant. Subsequent coding of the transcript using *Atlas-ti*

allowed emergence of themes and renaming or merging of codes as needed. As shown in Table 1, all the codes were made based on Bourdieu's forms of capital, which were used as a theoretical framework.

**Table 1.** Codes used in data analysis

Code #	Codes
1	Embodied Cultural Capital (ECC)
2	Institutionalized Cultural Capital (ICC)
3	Objectified Cultural Capital (OCC)
4	Economic Capital (EC)
5	Social Capital (SOC)
6	Symbolic Capital (SYC)

## 5. Findings

After the coding process was completed, the number of each of the six forms was calculated. The results are shown in Table 2. When the participant was asked to clarify what advantages she would have in case of either teaching English or Korean as foreign languages, the advantages which she indicated are obviously divided into two parts in terms of the forms of capital. Only the four cases of embodied cultural capital are accepted as advantages of teaching Korean while the other forms of capital are related to those of teaching English.

**Table 2.** The number of the forms of capital produced in the interview data

Codes	English-related Capital #	Korean-related Capital #
ECC		4
ICC	3	
OCC	4	
EC	9	
SOC	5	
SYC	16	
Total	37	4

### 5.1. Embodied Cultural Capital

Regarding teaching Korean, advantages that the participant believes she can have over teaching English are related to ownership of Korean and nativeness which count as embodied cultural capital. The participant stated, "I'm quite happy, because I have ownership of my own language and I have native speaker intuition. So that's my advantages." Further, she explained that her nativeness affectively contributes to teaching Korean. Nativeness and affective factors, therefore, seem to be closely interwoven. She explained, "If I teach only the language, I will teach Korean. Because it's my native language and I feel more comfortable, more confident..." She also added,

Well, in Korea, as an instructor I did not feel confident because I was not a native English speaker. Sometimes, I feel that students think I'm not good enough even though they didn't say that. But here [in the US] as a Korean teacher I feel much more comfortable...

In the latter excerpt, she contrasts English teaching in Korea with Korean teaching in the US, and tends to believe that nativeness is concomitant with another affective factor, confidence, not just comfort.

### 5.2. Institutionalized Cultural Capital

As shown in Table 2, all other forms of capital are seen as sources of power which contribute to the participant's belief that teaching English provides more advantages than Korean. There are three cases that count as institutionalized cultural capital in the interview data with respect to advantages of teaching English. It is remarkable that institutionalized cultural capital is closely related to economic capital, specifically getting a job. Describing this strong correlation between these two forms of capital, she stated, "I think in English education field, most of the present professors who are in the field conducting research, I guess most of them have US degrees. And they have better chances to get a job in a university." Further, she said,

When you go back to your country, then you get a better chance to get a better job. Still, the competition is really, really severe. Even if you get a degree from the US, it's still very hard to get a job. And I can't imagine people who have Ph. D. degrees in Korea, they might have much harder chance to get a job in Korea.

In the two excerpts, she relates US degrees, which are a form of institutionalized cultural capital, to a better chance to get an English teaching job, which is considered as economic capital, and matches credentials such as TOEFL and TOEIC scores with getting a job as shown in her statement, "If you have a higher score in TOEFL, TOEIC and so on, you get a high paying job." It is clear that institutionalized cultural capital itself does not gain power but rather is empowered by economic capital. In other words, as maintained by Bourdieu [15], it is demonstrated that different forms of capital are closely interwoven rather than working individually.

### 5.3. Objectified Cultural Capital

In contrast to embodied and institutionalized cultural capital, which is not transferrable, objectified cultural capital such as textbooks or resources can be used in a concrete and tangible form. The latter, therefore, may be accepted as a more intriguing and available source of power in order to have access to privileges of the dominant group than the other

abstract two. Regarding teaching English, the participant often indicated better and greater access to resources of the dominant group in the US rather than in Korea.

She stated, “Because you have better resources and you have more opportunities to access to better resources...,” “You get better access to gain recent articles, or books, and more opportunities or experiences of more recent theories and trends...,” and “To conduct research, articles... For example, at my university, because we have the right to use a lot of resources, we can get articles or other resources...” Further, she said, “When you teach theory of the languages, every theory is based on English teaching, still I will teach English...For example, when I took the Korean certificate program, all the theories from second language acquisition of English [from the US]...” From the excerpts, it can be assumed that the participant believes it is difficult to get better and more recent resources such as articles, books, and theories when teaching English in Korea than in the US. In the same vein that institutionalized cultural capital correlated with getting a job, objectified cultural capital is closely linked to enhancing English proficiency as described in her statement, “If you study abroad, in US or England, then you can get to improve your English proficiency.”

#### 5.4. Economic Capital

As demonstrated in the interview data, economic capital such as a high paying job, more positions, higher demand from the students, and better status empowers institutionalized cultural capital such as TOEFL scores or high English proficiency. Because economic capital functions as a compensation for the participant’s struggling to achieve high proficiency in English, she might have produced as many cases of economic capital as the second rank according to the number of each capital form. For instance, she stated, “In Korea, if you speak English fluently, then it’s easier to get a high paying job,” “Probably English teachers will have more voices compared to Spanish teachers, because there is a higher demand for learning English from students and the society,” and “If you have a higher score in TOEFL, TOEIC and so on, you get a high paying job.”

#### 5.5. Social Capital

In a similar fashion to the connection between economic and institutionalized cultural capital, social capital seems to be closely related to objectified cultural capital. Through social networks for improving professional English knowledge such as conferences, the participant attempts to maximize objectified cultural capital as shown in her statements, “Because you have better resources and

you have more opportunities to access to better resources, and more experts in that field, you can go to conferences, seminars here,” and “So through professors or peers, we can get more information. We get more recent information, attend different conferences...”

In addition, she believes that participating in social networks in the US can help her give more opportunities to interact and communicate with various people from diverse environment. She said, “Students in Korea, they might not have that kind of resources or opportunities. Because all the students are all from Korea, they are all Korean students, they might not have chances to interact from diverse background, diverse environment.” She also stated,

And then you have better opportunities to interact with people from different countries. So you will have better knowledge of diversity. And more interactions. But people from different backgrounds...When you go abroad, if you can speak English, you can communicate with people from different parts of places

#### 5.6. Symbolic Capital

As shown in Table 2, symbolic capital is ranked first in the number of the forms of capital. The ideological belief that English is a global language tends to function as symbolic capital so that the participant may greatly value English teaching as shown in her statements, “English is the world language. When you go abroad, if you can speak English, you can communicate with people from different parts of places,” and “If I get to teach like TESOL program, methodology... then I will choose English because it’s the most powerful language in the world.” It can be assumed from the excerpts that the participant’s acknowledgement of English as a global and world language causes actions such as “communicating with people” or “teaching in TESOL program” rather than is caused by them. Such assumption can be elucidated by the Bourdieu’s [13] notion of *symbolic violence*. He maintains that symbolic violence considered as a tacitly exercised violence by the dominant classes is often concealed in discourse. It forces the dominated classes to support the alien dominant culture. It seems, therefore, that symbolic power and symbolic violence are closely interwoven.

When the participant articulated the advantages of English teaching, she often related the high demand for English made by students to greater acknowledgement of it. That is, a strong interplay between symbolic capital and economic capital was often observed. She stated,

If you have a degree from English-speaking countries, if you bring that degree to your country, you will have better treatment and

people will acknowledge you more and I mean in social context, you will be better recognized as a teacher.

Further, concerning her job as a Korean assistant instructor (AI), she said,

Um...maybe because the demand from students is lower than Chinese and Japanese. In both departments, there are 10 AIs each but In Korean, only two AIs...Less demand from the students makes Korean department smaller than the other two, Chinese and Japanese...

Relating students' high demand for English to teaching jobs at the college level and greater acknowledgement, she stated,

There is high demand from students in social context, English has been treated as a valuable language. So if I become a professor in English department, then I could be better acknowledged. I'm very honest. I can't ignore the social context...

Such interplay was also observed between symbolic and institutionalized cultural capital such as a degree from a foreign country. She said, "They still prefer someone with a foreign degree from a foreign country," and "Korean people have a tendency to put more value on people who have a degree from a foreign country, especially in the US."

It is noticeable that in terms of affective factors such as confidence and intimidation, symbolic power contributes positively to English teaching while negatively to Korean teaching. She stated,

One time when I went to the orientation last year, there were many Chinese and Japanese AIs but only two Koreans. So we felt a little intimidated. Nobody is talking, you are only two...but still we feel like how small we are. Nobody is pointing out...but we feel that ok, our department is smallest...

Such contribution is shown in the following excerpt.

F: In Korea, English is a powerful language. So if I teach English in Korean university, probably, I will feel confident...

J: So you're talking about... that confident means not about nativeness but...

F: I mean... acknowledgement, status...

J: Ok, what about here, a Korean professor here?

F: Maybe I'm not as acknowledged as the English teacher in Korea. So the Korean teacher here is less powerful

*(J is the researcher while F is the participant)*

It is noteworthy that confidence interacts with symbolic capital in English teaching whereas it is closely related to the participant's nativeness in Korean teaching. Finally, as Bourdieu [13] suggests, it is corroborated that symbolic capital functions as an authoritative embodiment of the value of other

forms of capital such as economic or institutionalized cultural capital.

## 6. Discussions

In this qualitative study, it was clearly shown that when the participant was asked to choose between English and Korean teaching for a job, she encountered a conflict in which various factors including nativeness, getting a job, acknowledgement, language proficiency, access to resources, and social networks are moving between the personal and the social. The conflict is evident in the following excerpt.

J: When you are asked to pick one between two teaching jobs, English and Korean teaching, at a US university, what would you like to pick? Why?

F: Um... that's difficult, it depends on what I teach. If I teach content, I will take English. But I teach skills, then Korean...

The forms of capital could unravel such intertwined factors and illustrate how they are related to each other.

Next, it is obvious that English itself is not powerful but rather various forms of capital as sources of power are closely intertwined while contributing to empowering English. For example, institutionalized cultural capital was linked with economic capital while objectified cultural capital with social capital. Then, it was corroborated that symbolic capital contributes to increasing the value of other forms of capital.

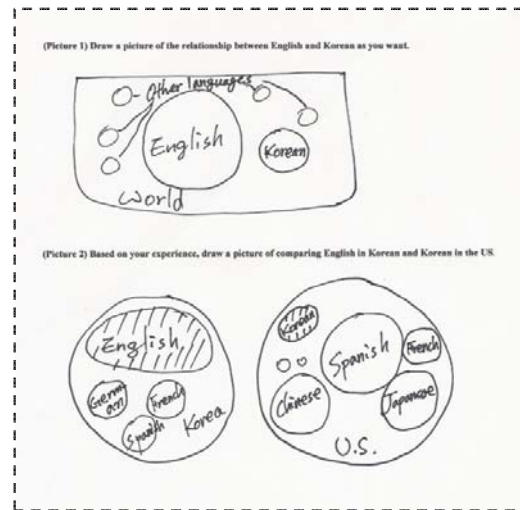


Figure 2. The Participant's Drawings

Finally, in terms of the accumulated amount of capital, there is a strong possibility that the participant will choose English teaching when she is asked to choose for a job between EFL teaching in Korea and KFL teaching in the US. In the participant's

description of her picture of the relationship between English and Korean (See Figure 2), the possibility becomes more obvious. She stated,

It's hard to articulate this... English is the most powerful language but Korean is one of the least powerful ones. English in Korea is very important, the biggest part. But Korean in US is very small, Spanish, Japanese, Chinese, French...

## 7. Conclusion

One limitation of this study lies in the number of the participant. Moreover, the participant had had considerably different experience in teaching English and Korean, thus having considerable effects on the results. Therefore, further study is needed into what effects different pedagogical background or different length of teaching experience will have on a person's choice between two foreign language teaching jobs. Though it seems risky to generalize ideas from the study, some ideas could be drawn as implications for the foreign language teaching field. First, because foreign language teachers are affected by various sources of power around the language as observed in the study, they need to be located within broader social, cultural, economic, and political domains for a better understanding of employment choices. Next, if a foreign language teacher is located in less powerful position in terms of the amount of capital, teacher educators and policy makers could empower the teacher to contend with their less privileged position, finding ways of making up for lack of capital. Finally, because some forms of capital may be unfairly distributed and reproduced through coercive power exercised by the dominant group, we need to explore ways of redressing it in terms of social justice.

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# Improving Student Listening and Engagement for English Language Learners with Sound Field Amplification

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## Abstract

*Sound field amplification technology uses a wireless teacher microphone and speakers in the classroom to enhance the teacher's voice, resulting in clear, even distribution of the teacher's voice throughout the classroom. Research has shown positive effects on hearing and speech perception for many students, including English Language Learners. This study investigated benefits beyond improved speech perception from the perspective of classroom teachers. Unstructured interviews were conducted with 11 teachers who used sound field amplification and SMART Board technology in a high needs urban school with a high percentage of English Language Learners, for 2 years. Using qualitative data analysis procedures, 4 primary themes emerged, describing benefits of sound systems in Enhancing English and French Language Learning, Teacher Effectiveness, Enhancing Student Engagement and issues of Managing Technology. Teachers reported innovative uses of the technology to create more dynamic, engaging classrooms, and described particular advantages of the technology for English Language Learners.*

## 1. Introduction

Classrooms are busy places and as a result, can also be noisy places. Anderson coined the term "learning to listen in a sea of noise" to describe the situation in which children are required to spend a large part of their day engaged in listening, yet under less than optimal acoustic conditions [1]. Noise is a problem for everyone, but some students experience more difficulty than others. This includes young children with immature listening skills, students with temporary hearing loss from recurrent ear infections, students with auditory processing, language or learning disabilities, and English Language Learners. Research shows that children are less able than adults to listen and understand effectively in the presence of background noise [2], [3], [4]. Not only do children have neurologically immature auditory processing skills, they have a weaker language base,

and fewer metalinguistic and metacognitive strategies to use when they have missed part of the message because of interfering noise. A variety of studies have indicated that understanding spoken language in the presence of background noise is even more problematic for adults and children learning English as a Second Language [4], [5], [6], [7]. Mayo and Florentine found that children acquiring English at an older age had more difficulty with speech discrimination in noise than younger bilingual children [6].

This difficulty with speech understanding in noise is not postulated to be related to differences in hearing levels between English Language Learners and children with English as a first language (although the problem of undiagnosed hearing loss in children who are newly arrived in Canada is probably underestimated in the literature). Rather, when individual words or speech sounds are missed because of high levels of background noise, listeners must rely on their knowledge of the language, contextual cues, and metalinguistic and metacognitive strategies to make sense of a distorted or partially missing message. This is a difficult task for a child still learning a new language.

Sound field amplification systems are a technology shown to be useful in minimizing the detrimental effects of background noise. This technology consists of a teacher-worn, wireless microphone and one or more speakers in the classroom. Mild amplification allows the teacher's voice to be clearly heard above the background noise, at a volume that remains consistent throughout the classroom, and throughout the day. Because the speakers distribute the teacher's voice equally across the classroom, all students are able to hear clearly. The teacher's voice remains at a constant level, even if he/she turns away from the students (as when writing on the blackboard). When a second, pass-around microphone is made available for students to use when speaking, students are able to hear their peers more clearly, as well.

Research with children indicates better ability to discriminate words and spoken language more accurately with the use of a sound field amplification system than without [8], [9]. Studies have found

improved scores in dictated spelling tests [10] and better standardized test scores in early literacy [11]. A longitudinal study by Gertel, McCarty and Schoff found that students in amplified classrooms scored 10% better on a standardized achievement test than students in unamplified classrooms [12]. Outcome measures from the Mainstream Amplification Resource Room Study Project (MARRS) indicated better scores on standardized tests of listening and language skills for kindergarten students, and better scores in the areas of math concepts, math computation and reading for grade 2 and 3 students [13]. Massie and Dillon reported statistically significant improvements in ratings of attention, communication and classroom behaviour in amplified classrooms, and noted that teachers considered that "sound-field amplification facilitated peer interaction, increased verbal involvement in classroom discussion, and promoted a more proactive and confident role in classroom discussion" [14]. Allcock found improvements in standardized test scores of phonological processing, with 74% of children in amplified classrooms achieving an improvement of 1 stanine or more, versus 46% in unamplified classrooms [15]. Rubin, Aquino-Russell, and Flagg-Williams, in a study of 60 Canadian classrooms, found statistically significant increases in student responses to teacher statements, decreases in the number of teacher repetitions, and fewer student initiated communications with peers during instruction (i.e. fewer instances of students speaking amongst themselves during teacher instruction) in the amplified classrooms [16].

Benefits of sound field amplification have also been studied for English Language Learners. Sound field amplification has been shown to produce improvements in speech perception scores of up to 30% for children learning English as a Second Language when noise is present [17], [18]. Vincenty-Luyando compared monolingual school children and English Language Learners in their speech perception accuracy in a real classroom with typical classroom noise levels introduced, with and without sound field amplification. English Language Learners had significantly poorer phoneme discrimination abilities in the presence of noise (63% vs. 76% for children with English as a first language). Under the highest noise conditions, all children's scores combined improved by 19% with the introduction of sound field amplification [19].

There is no doubt that the primary benefit of sound field amplification is to make the teacher's voice clearer, more consistent and easily heard by students wherever they are located in a classroom. However, many studies have also reported anecdotal comments or questionnaire responses by teachers which suggest that sound field amplification also impacts less easily quantifiable, but equally

important aspects of classroom learning such as teacher effectiveness, classroom management and overall listening skills. These findings include less need to repeat instructions [20], [21], [22], better student attention and on-task behaviours [23], [24], [25] fewer teacher absences due to vocal problems [26] and better listening skills [27], [28],[ 29]. These reports suggest that sound field amplification may impact more than just speech perception.

There is certainly a lack of research focused on describing the experiences of the user of sound field amplification, the teacher. Seidel broadly describes qualitative research as the process of "noticing, collecting and thinking" and this describes the impetus for the present research study very well [30]. In this author's experience as an educational audiologist, teachers do not just use the sound field system when the classroom is noisy, when acoustics are poor or when there are at-risk learners in their classrooms; they use it all of the time. Teachers in classrooms with good acoustics, in classrooms with few at-risk learners, and in high school classrooms are still enthusiastic users of sound field amplification. Why, then, do teachers expend time and energy using sound field amplification systems in quiet classrooms with good acoustics and attentive students as well as in noisy, reverberant, busy kindergarten classrooms?

The research described in this paper came about as a result of meeting the principal responsible for initiating a trial of sound field systems and SMART Boards (interactive whiteboards) in her school. This project was based on her understanding of, and commitment to, the benefits of this technology described in the literature. Her report of teacher enthusiasm for the technology matched this author's own past experiences working with sound field systems in classrooms over many years; hence, a research project formally exploring teachers' use of the technology was born. This research project provided an opportunity to explore the "noticing, collecting and thinking" about subtler benefits of sound field amplification that I have consistently noted in my own practice, in a more systematic and focused way.

The rationale for this study, then, was twofold – to explore teacher experiences with sound field amplification and to explore whether this impact might be expected to differ for English Language Learners.

## 2. Method

This study took place in a kindergarten to Grade 5 school located in a low income area of Toronto, Canada. Of the approximately 300 students in the school, 65% are not native English speakers, 98% have parents who were born outside Canada, and 40% of students have Individualized Education Plans



(IEPs). Family income is quite low in many cases, with 37% of families classified as low income (personal communication, school principal).

Despite many challenges, the school in this study has become a dynamic and innovative place to learn, with a variety of provincial and national awards for teaching, educational leadership, mathematics, and use of technology in education. School staff are committed to exploring new approaches, programs and technologies for their students. School and community programs include Reading Recovery, literacy and numeracy programs; technology includes a digital music lab, Macintosh iBook laptop computers in each classroom, wireless network, and a school computer lab. Class sizes in primary classrooms are quite low, with an average size of 20-21 students.

In 2007, at the initiative of the principal, partnerships with SMART Board and Front Row enabled the installation of SMART Board interactive whiteboards interfaced with Front Row Vocalight infrared sound field systems in 11 classrooms, including the library and computer lab. The sound field systems provided amplification of the classroom teacher's voice, students' voices (with separate passaround microphones) and audio from the SMART Boards or alternatively, sound sources such as iPods or tape recorders. The study commenced in October of 2007, and continued to track use of the technology throughout the 2007 and 2008 school years.

This study was approved through the university Human Participants Research Committee, and consent forms were signed by all participants prior to interviews. Unstructured interviews were conducted with 11 teachers, including the librarian and French teacher. Each teacher was initially asked an open ended question "what do you think about your sound field system?"; follow-up questions regarding observations about vocal fatigue or difficulties managing technical aspects were sometimes asked, but generally teachers required little encouragement or prompting to provide their thoughts. Each interview was conducted in the teacher's own classroom, lasted approximately 20 minutes and was audio taped for later transcription and analysis. The school principal was not interviewed formally, but her comments made during meetings and presentations throughout the course of the study were considered as well.

Analysis of the data was approached from a grounded theory perspective. Interviews were transcribed from audio recordings, and transcripts were read carefully. A number of code words and phrases were identified, and highlighted. Comparisons between subject transcriptions were made, and common code words and phrases were identified. After numerous re-readings and analysis, several themes were identified and re-coded with a

brief descriptor. Source codes were attached to each comment to identify the location of data within the transcript. Theme codes were then developed for the data segments. Once themes were identified, category codes were developed so that similar themes could be combined and analyzed together.

### **3. Results and discussion**

Several themes regarding benefits of sound field system use emerged from interview analysis that were surprisingly consistent across teacher interviews. These were given the descriptors "Enhancing English and French Language Learning", "Teacher Effectiveness", "Enhancing Student Engagement" and "Managing Technology in the Classroom".

#### **3.1. Enhancing English and French language learning**

Almost every teacher commented on the fact that the sound field system allowed them to provide a better spoken English model to their students, enabling them to hear the subtle phonological differences that result in differences in meaning. This was expressed differently by different teachers, but the core underlying concept seemed to be that English Language Learners needed an English language model that was not just simpler in terms of grammar and vocabulary, but that individual speech sounds and words needed to be acoustically clearer.

Many languages are represented at this school, all of which have different phonological and syntactic features from English. Because of the large number of English Language Learners at this school, teachers emphasized that the development of oral language skills, and inclusion of oral language activities, is a strong focus and plays an important role in all learning activities at this school. The importance of students being able to hear the teacher's spoken language model as clearly as possible was highlighted again and again by the teachers in their interviews.

In addition, learning French as a second language is required in Canadian schools. While most teachers referred to the importance of a clear language model for learning English, the French teacher highlighted the challenges inherent in adding the requirement for students to learn French as well. She noted that even for native English speakers, there are confusing differences between English and French. For example, in French, plural nouns are often marked with a final /s/ in print which is silent, but denoted in spoken French by the preceding article (such as the use of "les" instead of "le" or "la" to indicate a plural noun). Nouns are also characterized by gender which is reflected in the articles and adjectives used with

them (for example, “intelligent” in its masculine form has a silent final /t/; “intelligente” in its feminine form requires articulating the final /t/). This is not so in English, which does not characterize gender in nouns, and where plurality is frequently indicated by use of an audible final /s/ or /z/ plus auxiliary verb agreement (e.g. “The boy is going home” vs “The boys are going home”). These are confusing and subtle syntactic differences denoted by phonological features between languages with which students are relatively unfamiliar (English and French), and which they may be unaccustomed to listening for in their native language. One teacher commented that at this school, in fact, French may represent a third, fourth or fifth language for some students.

Teachers commented many times that the sound field system allowed them to reinforce morphological markers, auxiliary verbs, and other difficult-to-hear aspects of English syntax and to provide a consistent, clear English model. As well as hearing a clearer English model from the teacher, the sound field amplification was also described as providing a better opportunity for students to hear their own, and peers’, pronunciation. For example, one teacher recounted an incident in which she had recorded a guest storyteller through the sound field system, and then allowed the students to play it back to practice their own reading. One student heard for the first time that his articulation of /r/ and /l/ were incorrect, and asked the teacher for help with this.

### 3.2. Teacher effectiveness

Teachers consistently reported the same positive effects on vocal health noted elsewhere in the literature [26]. Several commented on fewer sore throats, stronger voices at the end of the week and generally less vocal strain and overall fatigue.

However, they also noted benefits of the sound field systems to their teaching practices which went beyond simply providing them with stronger and healthier voices. Several commented that they were able to be more dramatic and effective storytellers; they were able to vary their vocal intensity, intonation patterns, and vocal sound effects while reading a story and students could hear these subtle nuances. The principal and several staff members also noted the effectiveness of the sound field system in the library, where the kindergarten through grade 3 students gather during indoor lunch/recess periods in inclement weather. The significant time, energy and vocal effort saved when bringing students in, monitoring behavior and dismissing students was noted in this situation. The minute or two saved in getting students’ attention, or providing an instruction only once instead of multiple times may seem inconsequential as an individual event, but over the course of a day, these minutes add up to

significant time devoted to instruction rather than classroom management.

### 3.3. Enhancing student engagement

A change consistently noted by teachers and principal was improvements in student engagement. Student engagement is an important topic in education and been shown to be strongly linked to increased academic success and decreased dropout rates [31]. The explanation offered by both the principal and several teachers was that the SMART Board provided visual engagement, and the sound field system provided auditory engagement. The sound field system was described as providing opportunities for teachers to use audiovisual materials in more interesting and engaging ways for students, and to make classrooms more dynamic learning environment as a result.

The SMART Board, in combination with wireless Internet, allowed access to a variety of interesting materials and activities which would otherwise be difficult or impossible to use, and the sound field system allowed the accompanying audio to be heard clearly and consistently. When the SMART Board was not in use, however, teachers still used the sound field system to add audio to classroom activities in innovative ways. One teacher arranged to have a visiting Aboriginal storyteller work with her students, and audio recorded the story. She then played the recording through the sound field system to allow students to listen to the recording and practice reading the same story, matching her inflections and style. Another teacher, in conjunction with a doctoral student from a nearby university, was engaged in a project where students did interviewing and role-playing, and used the sound field system to replay the audio part of the recording during student editing, to allow them to hear more clearly.

Another teacher plays classical music through her iPod during quiet seatwork and Halloween music and sound effects during reading of a Halloween story. She noted that music helps set the tone for a variety of classroom activities, and music is clearer through the sound field system than through her own CD player. Another teacher kept an active link on the SMART Board to an eagle nesting site in British Columbia over the course of 6 weeks so students could monitor the baby eagles both visually and auditorially.

Every teacher mentioned the effectiveness of the passaround microphone in increasing student interest and willingness in speaking in front of the class. A frequent comment was that shy or quiet students were more willing to speak in front of the class when the passaround microphone was available. One teacher commented “I can be dramatic without being loud, it makes them far more engaged. So that’s why I like it. The microphone – amazing. I have some

very very very quiet children who don't want to speak. When they get that microphone in front of them for show and tell or when they're being one of Five Little Pumpkins, and they're saying their lines, the quiet ones are speaking. It's really really bringing them out."

Another noted that when a student was using the passaround microphone, other students afforded him/her the respect and courtesy of listening. Classroom management is facilitated, since the use of the passaround microphone is a clear signal that a student (and only that student) is speaking, and only upon being handed the microphone, can the next student speak.

### **3.4. Managing technology in the classroom**

While interview questions were non-directive, one specific question was asked of all the teachers, "was it difficult learning and managing the technology, since SMART Boards and sound field systems were all installed at once?" Many teachers commented that installing all of the technology at once was in fact a more effective strategy than installing it in stages, since a teacher could request assistance from any one of a number of staff members simply by walking down the hall. Teachers reported feeling less intimidated by the technology since everyone was learning it together, and help was always available. Because of this school's past history of implementation of technology, most teachers did not feel concerned about having yet more technology added to their classrooms.

## **4. Conclusions**

Sound field amplification was implemented primarily for reasons of less than optimal classroom acoustics (typical of many aging schools), and based on the research indicating the benefits of sound field amplification for speech perception for English Language Learners. However, this study suggested two benefits of sound field amplification that have not been discussed or explored in previous research, which has tended to focus more on speech perception and academic outcomes. Teachers clearly described the very specific need for English Language Learners of the provision of clear English phonology. Intuitively, learning a new language is easier when the message is simple, short, clear and uses simple vocabulary and grammar. However, the teachers in this study were also convinced that hearing all of the individual speech sounds and words was critical, since even if the individual speech sounds of English are the same as in one's first language, English uses speech sounds to convey meaning (such as plurality and verb tense) in ways that are different from other languages.

Another theme emerging from this study which has not been previously discussed in the literature is changes in student engagement related to sound field system use. The concept of engaged learning is an important one in education, and its relationship to outcome measures such as school dropout rates has been demonstrated [32]. Specific indicators of student engagement have been developed by Jones, Valdez, Nowalski and Rasmussen, which allow educators to create a picture of what engaged learning means in a classroom, and how to evaluate and reinforce it [33]. These indicators of a community of engaged learners emphasize collaborative learning, complex and authentic (i.e. relevant to students) activities, high levels of interaction between students and teachers, and students and peers, and an emphasis on the role of the teacher as collaborator, co-learner and co-investigator, allowing the group to construct knowledge (rather than teacher as disseminator of information). In more recent years, the concept of three types of engagement has emerged. These include behavioral (participation and involvement), emotional (positive and negative reactions to teachers, academics and school), and cognitive (willingness to engage with difficult material). The use of technology to increase student engagement, particularly for behavioral and cognitive engagement, has begun to be discussed and investigated in recent years. This study suggests that sound field amplification might appropriately be added to this list of engagement-enhancing technologies as something which may enhance behavioral engagement.

As with any qualitative study, generalization of results can be limited because of the small number of interviewees, and the specific context in which the participants teach. However, teacher comments from a range of grades (junior kindergarten to grade 5) and in a variety of areas (from the librarian to classroom teachers to the French teacher to the special education teacher) were remarkably consistent.

The staff and students of this school are both typical, and not typical, of other urban public schools located in areas with high immigrant populations and low average family incomes. They face issues of poverty, English as a Second Language (for both parents and students), an extremely multicultural community, new immigrant challenges and an aging school. They have benefitted from the infusion of money and technology as a result of school board, provincial and federal government and corporate partnerships; yet these came about because of the efforts of a visionary staff and are by no means impossible for other schools to duplicate.

The benefits of sound field amplification for improved hearing and listening for young children and at-risk learners has long been known; however, the results of this study suggests that there may be

less tangible but equally important effects for all participants in the classroom community. The teachers in this study were able to expand the possibilities of sound field amplification to create not just better listening environments, but more dynamic learning environments.

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# The Bee or not the Bee, That is the Question

## A Holistic Approach to Teaching in a TEFL Graduate Course in Iran

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### Abstract

*Educators should notice alienating effects of compartmentalized education and awaken the communion with Self, nature and others in their students and themselves. We as Researchers of this qualitative case study appraised a lived experience in a TEFL graduate course of 16 students in Iran, a country once having all-round soul-based education. We illustrate some procedures of a "holistic" practice and its impacts on participants' attitudes observed in class discussions, questionnaires, drawings and reflective writings. Growing number of participants' contribution in global holistic activities based on this course is only one ripple effect of this approach; since, according to them, they tasted a stress-free, cooperative, self-motivating, insightful ... experience in which they heard their own voices.*

### 1. Introduction

On one of the summer days of 2009(July 20<sup>th</sup>), I had an appointment with my professor, Dr Mahdavinia, to talk about my thesis. Before beginning to talk about our planned topics, I asked my professor's view about the aftermath incidents of the 10<sup>th</sup> president elections in our country<sup>1</sup>. Dr Mahdavinia responded: "whatever happens in a society is a true manifestation or product of education of that society, good or bad". "The education of most of the courtiers including Iran is government dominated to a large extent and curricula are prescribed. The outcome of such approach and its political purposes deeply influences particularly the social sustainability of the country" he continued. Dr Mahdavinia added that the true education is changes that happen in the learners by the learners and with

<sup>1</sup> The tenth president election in Iran happened on June 11, 2009 in which some people rejected the result and ended to demonstrations for few consecutive days (local papers).

their own active participation in the learning settings not for them by a teacher. Students in such classes make their own meanings when they involve their body, mind and soul holistically in all class activities. In such education the learners construct their own knowledge and master their own desired skills and attitudes. In brief, people of such society with such education as holistic education will definitely learn the *know-how* of shaping their own society as a part of the larger society of the present global world.

### 2. Claiming or Climbing (The problem)

"The Iranian students are used to traditional methods and approaches and they can't adjust themselves to the new ones; moreover we have the limitation of time and resources in Iran's education system..." We often hear pretexts like those above when the challenge of changing confronts most of us as university professors or school teachers. On the other hand we have quite a verbatim list of theories and suggestions for educational system to change, forgetting the fact that WE, too, are among the most important pillars of education. In order to transform it we must begin from ourselves. Unfortunately, as Paulo Coelho puts it, "everyone seems to have a clear idea of how people should lead their lives, but non about his or her own" [2]. The result is that a professor or teacher may deliver an elaborate and scientific lecture on authentic assessment, reducing affective filters, post method era, reverence for students' individuality, holism and many other concepts to his colleagues and students while his class is still held like those old days in which he didn't knew about those theories.

Hearing about such modern and postmodern theories and approaches would be agonizing for a student who can hardly trace a bit of the taste of those humane approaches to education in the whole history of his schooling. Even it can establish a feeling of contempt and degrading attitude in his

mind for breathing in such an educational air. It should be mentioned that we are not going to deny the effectiveness of handing those values and ideas through words down to others. If we cannot make honey out of pollens of science and art, at least, we can hand down those pollens to our students, hoping for a change in THEIR time. *The bee or not the bee, that is the question.* Which one do we choose to be? The creative bee that is in harmony with nature, others and his intuition and produces sweet result for himself and others, or an isolated static egoist entity who thinks himself as the only living wise entity in the world?

It's not the matter of all or nothing, and we are not to disparage the attempt of our teachers and professors in this way. This is an urgent call for tuning in to a "self-organizing revolution" [13] in education which is happening around the world even by some virtuoso teachers of us in Iran. It doesn't matter how much proficient you are in your field and what's your degree; what matters is to begin somewhere and let ourselves and our students taste the sweet honey of this journey toward harmonizing our Selves, Mother Nature and each other. Hallaj (858 - 922), an Iranian ascetic Sufi, says: "If you can't be the sun in the dark night, be the moon at least; and if you can't be the moon, at least, be the glow-worm" [8]. Iranian-Islamic theosophy is replete with such guidelines for self-developing educators.

### 3. Building the hive (on syllabus, class setting...)

This course had sixteen TEFL graduate students, in two separate groups. Our company included twelve female and four male students, along with the professor. Most of us had the experience of teaching in language institutes, government-run schools or as tutors. After a warm greeting, instructor asked students to sit

in a semi-circular shape. It made the impression that we [were] going to have a course of discussion and cooperation, instead of unidirectional lectures." (\*)<sup>2</sup>. "The class was full of peace and our instructor seemed to be very affable and fair" (\*).

The course syllabus was handed to each participant. Listing some key words, it had explained that we were going to work on teaching language skills. The course goals were listed in 13 items-being followed by a brief description of course organization, methods of assessment, and methods of instruction. Some specific learning objectives and course requirements and **tentative** evaluation were

<sup>2</sup> Participants' comments will be illustrated by an asterisk mark (\*) at the end of their remarks.

also mentioned in the syllabus. At the end the tentative schedule and sources were illustrated in a table.

When we read the syllabus and that session's handout each student went on to

"introduce himself to other participants, talking about the background, the university [he has] been graduated from, why [he has] chosen that particular school, his experiences, interests, plans, believes and how [he] wants to achieve them...explain his understanding of teaching English and learning English and discuss it with other participants..."( syllabus). "As a teacher, in my opinion, it is important to know who we are dealing with as our students and what their interests and goals are."(\*)

In their first essays, students noticed the difference in approach and reflected on the first class as follow:

"Every thing was clear"(\*) and "Every detail was mentioned"(\*). "The course seems to be very enjoyable and full of new useful points to be learned." (\*). "I think his method of teaching is different from the teachers that I have had before, because he puts emphasis on whole person learning. ... "His approach is humanistic and his teaching method and syllabus confirmed my understanding."(\*) "I think students will be given the opportunity to express their views in the class and they will learn a lot from each other. (\*)

### 4. Dance of the bees (on procedures and class activities)

Each class began by distributing some handouts (and studied reflective essays). **Handouts** usually included topic sentences, arguments, brief and comprehensive literature on the topic, sample teaching procedures, description of class activities, sample syllabi, some key words on each topic, and sometimes a questionnaire. Topic was introduced by a phrase. Usually a quotation or a symbolic picture accompanied it and students were asked to reflect on it in a few minutes of silence. "Arguments" were some questions on that day's topic. They required us discuss different issues from our own viewpoints in groups and relate them to our experiences in life. They were different from typical questions that students had seen before in that they usually contained definitions and quotations from literature which helped students refresh their minds and gave them direction and some food for thought. They were more of some "authentic" questions in which we shared "responses and interpretation of texts rather than engage in any sort of mutual interrogation" [1]. They also encouraged a sense of integration and connection and lead students to think on issues holistically.

#### 4.1. Dance of the stillness & frenzy in the hive

One of the principles of holistic education is keeping balance [9] and “balance is based on the concepts of the Tao and yin/yang which suggest that at every level of the universe there are complementary forces and energies...that need to be recognized and nurtured...in the classroom” [10]. Rational scholars of today’s education stick only to the yang energies [10]. There was a holistic balance between paradoxes in this course, a balance between reflection in separate periods of silence\_ “*dance of the stillness*”\_ and serious hot arguments\_ “*frenzy in the hive*”. A holistic teacher’s art is to play a harmonic music by challenging and involving student’s whole and then bestowing him periods of reflection and stillness. This music was played in our class beautifully; when each student got a handout, our instructor would ask us to reflect on the topic sentence, picture or the quotation\_ which introduced that day’s issue\_ in a few moments of silence. That would be followed by a period of frenzy in which participants actively discussed the results of their reflections in groups. This process of reflection and discussion accompanied each argument.

“*Who can (make) the muddy water (clear)? Let it be still, and it will gradually become clear*” [7]. Have you ever seen a still bee on a flower which dances with the breeze? It IS doing something, but we may not see. Periods of **silence** and reflection at the beginning, during and even out of the class (provided by reflective essays) didn’t mean wasting of time to us. They played a big role in this course in combination with different activities. They “are used to organize what [had] been gained in periods of activity” [3]. Moreover “in the silent space of meditation soul and mind can mingle; imagination can freely move in a state of reverie and without the restraints of order or structure” [10]. One of the students had recognized the value of these silent periods as follow:

Devoting a few moments to silence and reflection in the class is ... a golden key for learning and you have this key in your classes. Some may think that the more the students and teacher talk in the class, the more they are involved and the better students learn ; but there must be some short periods of silence in a class (especially in graduate levels) for students and teacher in order to find themselves ,and reflect on issues better. We should keep this in mind that “**music is the space between the notes...**” (\*)

**Dialogic** nature of this class was an important factor in creating meaning. Heath attributes this idea to Vygotsky and Bakhtin and paraphrasing the latter writes:

Whenever we speak, we actually talk through the words of ourselves and others—words and phrases that we have heard many times and that become our own when we use them to say new things in what are new times and places. [15]

One of the students points to dialogic nature of the course in his reflective essay as follow:

I’d like to call this kind of active learning through cooperation and discussion ‘*Fishing in troubled waters*’. Learning takes place best when students are challenged. Out of these challenged or troubled waters they can fish big fish. (\*)

**4.1.1. Sample activity (1).** In one of the arguments, we were supposed to make two groups and play the roles of Behaviorists and Social cognitive theory supporters. The followers of each theory were expected to defend and support their own assumptions and criticize the claims of the opposite group:

Half of the class became enthusiastic supporters of behaviorism and the other half, supporters of social cognitive theory. I supported behaviorism so faithfully that one of my classmates almost got angry when she couldn’t convince me. (\*)

After a short period of silence and reflection on our **arts-based** experience, I related Rumi’s (1207-1273) “elephant in the darkness”<sup>3</sup>[14] metaphor to different theories’ attempts to describe and explain human learning. I came to this idea that these theories don’t see the whole, so they have to describe it from their own limited view... . I said: “why scholars tend to put theories against each other? We can integrate them and use them in a way that support and complement each other”. Dr. Mahdavinia nodded in confirmation and added: “Dewey curses such scholars”.

Eventually the use of **metaphors** increased in our class discourse like spring mushrooms. Encouraged by our instructor, we were expressing our understandings freely through metaphors, allegories and even by doodling on the board:

One of our classmates, who is a teacher, drew a picture on the board in order to answer one of the questions. I think it was a good technique to explain something which is abstract or is not very tangible. (\*)

We were talking about advanced concepts and relations for which academic language had run short of words: “Through metaphors, we link[ed] previously separated selves and understandings, with

<sup>3</sup>. Some people are in a dark room to meet an elephant for the first time. They can’t see it so they describe it by touching it; one touches its trunk and says elephant is like a tube; one touches its ear and says elephant is like a flabellum; another person touches its leg and says elephant is like pillar...



the usual connections yielding surprise and release” [4]. The ground was ready\_ and previous practices were a kind of warm up \_for stepping on a more advanced level of holistic learning in which art played a crucial role:

#### 4.2. Dance to Art’s tune

We were thunderstruck when our professor distributed some crayons and large sheets of paper among us and asked us to **draw our conclusions** on theories, their relationships and so on:

The session...you asked to prepare an artistic drawing... I really got surprised. (\*)

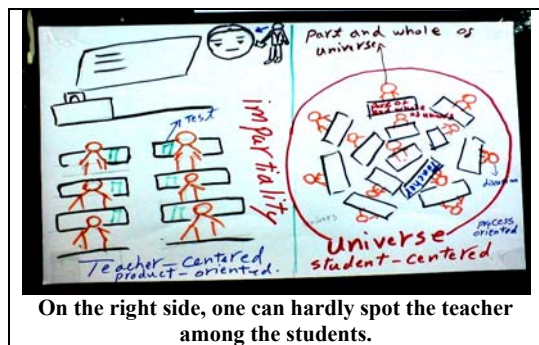
Diversity of activities ... especially incorporating art to language learning was really surprising for me.(\*)

I was surprised when we were asked to draw the picture of educational elements, but at the end it came out to be one of the most useful activities for me... .(\*)

Teaching MA students through drawing surprised me. (\*)

We were wondering how we could illustrate those highly abstract concepts like *learning* merely by colorful drawings. Though some of us had practiced similar but more limited tasks before on the board with some scribbles, we seemed frustrated at the beginning. Some wonderful holistic comments began to emerge in our creative artworks while we hadn’t studied any literature on holism before:

**4.2.1. Sample activity (2).** After a period of contemplation, discussion and scribbling, our group compared and contrasted a traditional class with an alternative one as follow:



**Figure 1. Teacher vs. student centered class**

We illustrated the alternative class as a part of the universe. We conceived of students as both “a part and whole of the universe” (\*).One can hardly recognize teacher among students because he

becomes a participant, someone like them (see Figure 1).

This “creative tension arise[d] when [we were] asked to do something that at first seemed illogical or impossible. Palmer writes, ‘Awareness is always heightened when we are caught in a creative tension’” [10]. Through intuitive creation we could recognize a “fundamental unity in the universe” and our inner “intimate connection” (as principles of holism) with this unity. We actually were excavating our Self or soul. “People can become keenly aware of soul in the process of their art and their longing for beauty and insight” [10]. We were totally involved in our learning which mostly came “from our senses and our direct experiences” [6] .

Only in aesthetic education is the total person involved in the educative process, for only in informed aesthetic perceptions are the centers of sense, affectivity, conceptualization, and imagination brought to focus in a single experience. [10]

#### 5. Gathering the honey (assessment procedures)

*Nature doesn’t force the bees to produce a lot overnight. Bees’ productivity is distributed along their lifetime reasonably. They have small units or cells of “here and now” to fill little by little according to their own pace.*

Everyone was as busy as a bee but nobody was in hurry or worry for a nightmare called “final exam”. From the very fist session Dr. Mahdavinia assured us not to worry about final exams and grades, as we used to be in other courses. He told us just to enjoy being together in the class. We, as unique individuals, were being filled with wonderful sweet results of a process of arts-based cooperation, enjoying living in “here and now”. Only for the sake of finding who we were, what our abilities were, what we needed to know, and how we perceived the learning affected us, he tasted our honey and assessed us every now and then [12]. In short, he assessed us to become acquainted with us.

One of our most argumentative and productive sessions was on assessment so we would like to let our co-participants’ voices reach out in this part not only as holistic evidences but also as a part of the literature about assessment because in this session we carved the core of this concept together through our drawings. We were supposed to think of some drawings to illustrate characteristics of an alternative approach to assessment which could eliminate shortcomings of the traditional approach, based on our experience in our classes and related literature we had studied (see Figures 2 and Figure 3). My classmates illustrated the following characteristics

for an alternative assessment in their drawings summarized as follow:

- An alternative assessment approach to traditional testing should be a “process based” humanistic approach in which “teacher is a part of the process of learning who puts emphasis on understanding...in a stress free environment” (\*)
- Assessment “should encourage student’s **reflection** on his own performance, learning and so on.” (\*)
- “Factors like: student’s feelings, creativity, and what he specially is able to do should be considered” in assessment (\*)
- Assessment “should see the class and each student in relation to the whole universe.” (\*)

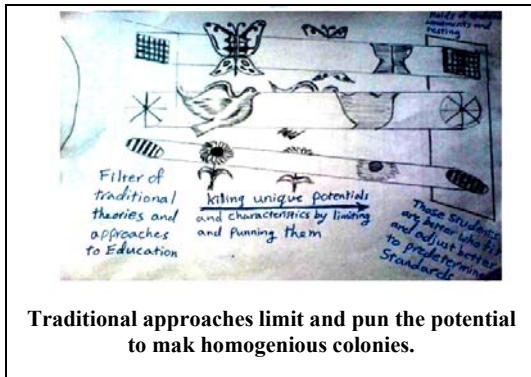


Figure 2. Traditional approaches

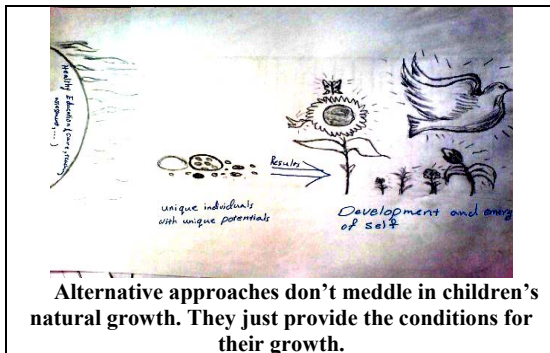


Figure 3. Alternative approach

I projected my conception of the traditional approaches to assessment and teaching as preplanned filters and molds which intend to raise human beings in a way that those filters prescribe (see Figure 2). Those students are considered top students who can well adjust to these filters’ expectations. These prescribed expectations burn students’ wings of creativity and inspiration and they may lose their

connection to their consciousness and source of inspiration for the rest of their lives. In fact they will lose their real Self. But in a healthy approach to assessment and education, in general, students are considered as unique seeds and eggs with unique and unlimited potentials (figure 3). In this way they will flourish freely in the warmth of a wholesome education, and they will be the source of other’s growth as well.

Here, by traditional I don’t mean something which belongs to the past and doesn’t exist now, but I mean something undesirable. Human beings today are a product of molding traditional approaches to education; and the most evident proof for that is the wave of different consumerist modes and fashions which make our youth imitate them like sleepwalkers by adhering to “external standards of adequacy and desirability” [5].

Now that we heard some ideas on an alternative approach to assessment let’s see how we were assessed in this class:

As a concrete assessment method, each individual was asked to collect his unique sample of honey in a cell called **portfolio**\_ a cumulative collection of the work students have done[12] .Our portfolios were supposed to have at least<sup>4</sup> four main parts:

1. A paper on a favorite topic for that semester. Each student was free to present a lecture or teaching procedure in its stead.
2. A glossary of key terms. Each student was supposed to collect a unique collection of technical terms he encountered during his studies with a brief definition of each, which was followed by its source.
3. Designed activities and lesson plans which were created by students in groups or individually.
4. And the last but not the least was reflective essay. It was one of the most powerful features of this class. Students were addressed to shed some light on at least five basic questions in their reflective essays: What was the topic? What was discussed about the topic? What did you understand out of those discussions? What do you want to add to it? And Conclusion and comments about the class.

<sup>4</sup> Depending on their interest some students had added more to the portfolios: some had added class drawings, some had added their own syllabi for teaching each skill and so on.

## 5. Fry or fly? (Teacher's role)

Each session, after distributing handouts, “our professor sat down on one of the chairs in the circle with the same fair, peaceful and dignified manner [just like one of us] (\*)”. Dr. Mahdavinia always said: “when a teacher enters a class as a teacher education fails”. In this class, we usually “let go of roles for which we had been conditioned...instead we [began] to see ourselves as whole people where opposites, or polarities lie within us” [9]. We worked together in harmony as human beings\_ regardless of our gender and status. Our instructor acted more as an **impartial participant** rather than a dominant authority who knew everything or as someone who should shovel his knowledge down into students' minds through unidirectional lectures.

Concerned with Dr Mahdavinia's impartiality some were pro and some were anti. Some students expressed their slight disapproval in their questionnaires and reflective essays as: “I think it would be better to have your comments more...”; “It was better to ... inform us of your attitudes more” ...

But some believed it was a power point:

Teacher was the one who spoke the least, because he wanted to give the chance to students to express themselves... Instead of answering the questions himself, he let the students to approach the questions by their own reason, knowledge and experiences and this is a good strategy to involve the students actively in the learning process. This can be a big leap toward whole learning. (\*)

I'm more for the latter because I think an opportunity to be revealed and expressed is something that our real Self needs, and teacher's impartiality provides this opportunity. His role was more of a **dissolver** rather than a solver, similar to Wittgenstein's, because

he did not want to solve, but rather to dissolve, philosophical problems, to expose the confusions and illogicality inherent in them so that they lost their power to mislead. [10]

Once I remember one of the ladies objected and said: “each time I leave the class with a lot of questions”. Dr. Mahdavinia smiled and said: “that's what I'm after: once you come to the class with questions and leave it with more questions real education happens, because it's what keeps you going...”:

Beginning and ending the class with question gives the impression that we are in a never-ending process of learning and inquiring. Human being is in the process of moving and evolution as far as his mind is challenged with questions. (\*)

## 6. Every bee has its own “vuvvoice”<sup>5</sup>!! (On unique role of each student)

As it was illustrated in figure 1, the role of students and that of the teacher is intermingled in a learner-based class. If it wasn't for age difference between us and our instructor one who entered the classroom in the middle of the class might have problem in recognizing the instructor in our circle for a long time. We were a paradoxical whole made of unique members. In our soul-oriented educational practice we were meandering in a “paradoxical territory, a liminality, you might say, a capacity to stay on the border between the universal and the unique” by the help of our teacher [10]. Our uniqueness came from the soul, not from a focus on personal particulars and a delimiting of learning to what is personally relevant. Unique experiences of us were considered and cared for as one aspect of our uniqueness. Everybody was encouraged to express his own ideas and relate them to his experiences regardless of being right or wrong.

## 7. Holistic honey

In the process of data gathering we noticed that there is an interesting match between students' comments and the literature of holism in many holistic themes: lifelong learning, the role of spirit, transformation, love, peace, integration etc. They were developing theories and ideas which were sometimes a paraphrase of what pioneer scholars of holism had said. It is interesting to know that participants hadn't studied any literature related to holistic education directly in any book before; rather they were talking based on their own experiences in a holistic class. Their holistic attitudes and ideas were increasingly emerging by the passage of time and the intensity of such comments reached their climax in the middle of the semester; but they began to decrease to the end of the course unexpectedly.

It was a frustrating situation and it had occupied my mind because one of my primary goals in writing a paper on that class was tracing the development of holistic attitudes in participants because I had felt that development in myself. I went back to my own reflective essays and to my great surprise I saw the same pattern in my own essays. I was at my wit's end for a few days till a morning in which I jumped out of the bed with the answer: in my serendipitous dream I was discussing the issue with Dr. Mahdavinia. In response to that problem I thumbed through Miller's Holistic Learning and showed him Eliot's words on page 25 which I had skimmed through rapidly before:

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<sup>5</sup> The sound that a bee makes looks like “vuvvvvvv”

And the end of all our exploring  
Will be to arrive at where we started  
And know the place for the first time [10].

This time I found out that I shouldn't look for a linear relationship because "change is not linear"...and also it has a "non-verbal or tacit dimension" which we don't notice always [9].

One of my friends had pointed to nonlinear relationships in teaching the skills but I had ignored it before:

"I believe that language skills are interrelated and work as a network that should be studied considering the overlaps. In my opinion there is no first or last ..."(\*)

In her comment I discovered that one reason for nonlinearity could be the integration and interrelation.

## 8. Conclusion

We used the "bee" metaphor for teacher in this paper, because teacher, like the bee, guided by inspiration, gathers together sweet honey from all kinds of flowers, taking the best in them, thus producing a potion which heals [11]. Nowadays Human's soul needs to be healed urgently; teacher is one of those who deal with souls thus he needs more wisdom and strong imagination than information [10]. His main concern should be students' soul-center, *feelings*, which should be nurtured in a peaceful and cooperative environment. His holistic wisdom helps him to be balanced and organized and to know what he is doing and where he is standing. He helps his students to find their balance in their paradoxical aspects of inner and outer world by helping them out to ponder on the inseparable relationships among themselves, others, all things in universe and the flowing universal Self Who is a nameless of infinite names: God, Spirit, Soul, Tao, Allah... Thus a holistic teacher should allow for periods of reflection and silence in which students get a clearer vision of themselves. These periods of silence should have balance with periods of frenzy and activity which challenge the soul and every cell of student's body, provided mostly by teacher's impartial and dissolving role. Like a river bed he just lets his students' Self flow and transform to their infinite potentiality without a harsh attempt to fight their ignorance. In fact the best role a holistic teacher can bestow his students is to let them **be** themselves and have the respected and valued voices of their own. In assessing his students a holistic teacher should bear in mind this fact that much change in a

holistic entity like human being is invisible and nonlinear.

That's true that we have a long way to "to make the vision of wholeness a reality in today's world" [10] but the way by itself is an incredibly rewarding and enjoyable process.

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# Perception of the French Language and University Students Expectations

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## Abstract

*Due to ever changing societal, learner and institutional factors, current foreign language programs need to include analysis as a part of routine language review. The process of collecting foreign language learner needs is now viewed as increasingly important. In the interest of developing new approaches to French language instruction, this study surveyed the perceived needs of French language students at two major universities in Washington, DC. The research found that many students hoped to use the French language to advance their careers, and, at the same time, are emotionally tied to the language. The majority of students expressed a strong interest in conversational classes and subjects linked with their area of study. Many of them are interested in cultural information and literature. The results show that students come to our classes with many expectations and various needs. In the attempt to respond to such needs, the French language program should offer motivating courses in which both cultural and pragmatic aspects of the language are taken into account. Several suggestions for fulfilling students' needs and interests, especially male students' interests in the French language will be addressed.*

## 1. Introduction

In a new global world, knowledge of languages is not just a luxury for the elite but an essential component in the survival of nations. According to a survey on "Enrollments in Languages Other Than English in United States Institutions of Higher Education, Fall 2006", released by the Modern Language Association of America (MLA), interest in language study at American colleges and universities has increased significantly since 2002.

The study of the most popular languages, Spanish, French, and German, continues to grow and these languages together represent more than 70% of language enrollments. However, their dominance is slowly decreasing in the face of growing interest in languages such as Arabic (up 127%), Chinese (up 51%), and Korean (up 37%).

The need to maintain and attract students has spurred a revitalization of language courses within foreign language departments. Researchers [3], have advocated teaching languages as a by-product of students' interest in certain content areas or in subjects they are studying outside the language class. What are college French language students really looking for? To learn French for communicative purposes? For the study of literature and culture? For studies linked to their major or minor field? Is there a conflict between these three points? Student input is a tool used to respond to specific needs, to review existing programs and to build new ones.

The purpose of this article is:

- to sum up the results of a research aimed at assessing students' needs in the French language departments at two major universities in Washington, DC.
- to determine the factors influencing the choice of French as a foreign language, comparing male and female perceptions and expectations.
- to outline and discuss future goals of the language program.

## 2. Literature Review

A study conducted by Ali Alalou and Elizabeth Chamberlain [1] found that the reasons students study French are first, the language requirements for programs of study, second, personal interest and third, career objectives. Glenn Wharton [7], in his research about language learning interest at a Management University in Singapore, observed that the reasons deemed to be most influential in the choice of foreign language were a desire to travel to countries where the language is spoken and an affinity for its culture, followed by students' perceptions of employment opportunities. What are the perspectives of students in Washington, DC? Most Washington universities attract a student body markedly different from that of other universities, drawing students with much more international career goals. A large number of these students go into government, the Peace Corps and other development work, NGOs and business.

The insights gathered from students as to what they perceive as their language needs and the purpose for which they study the French language would allow professors to fill gaps in current course offerings by designing programs based on students' interests and needs.

### 3. Methodology

The questionnaire was developed through an analysis of foreign language learning surveys in other studies and discussions with undergraduate students. The questionnaire is comprised of 25 items with a combination of question types: in some questions students chose the answer that best expresses their opinion, in others they rated their preferences and/or were asked to write their comments.

*Questions 1 to 11* are aimed at gathering information about students' perception of the French language, their motivations for French studies and how they anticipate they will use the language.

*Questions 12 to 19* elicit information about which courses or subjects they would be interested in.

*Questions 20 to 22* are about how they would like to learn the French language.

*Questions 23 to 25* gather personal information about the students.

Surveys were sent by email in April 2008 to the undergraduates of the French departments of both universities. The emails contained a link to the online survey stored on the Survey Monkey server, producing a response rate of 25%, distributed almost evenly between the two universities. The number of returned questionnaires was 239.

## 4. Analysis of Findings

### 4.1. Who are the students?

Near 80% of the 239 respondents were female, the majority were 18 to 21 years of age. 50% were freshmen, 32% sophomores, 12% juniors and 6% seniors. A representative sample of students in the introductory, intermediate and advanced language courses was obtained. The majority (70%) of students were monolingual native English speakers; the remaining students spoke other languages (Spanish, Asian languages, East European languages). Only 11 of 239 had chosen French as a major, and 20 as a minor. 65% of them were majoring in International Relations, International Studies, International Affairs or International Politics.

### 4.2. Perception of the French language

Students were asked to quickly give 3 adjectives to describe the French language. The "emotional" adjectives outnumbered the others (beautiful : 92, romantic : 45, elegant : 20). They were followed by phonetic adjectives (fluid : 35, smooth : 11) and by linguistic ones (complex : 15 and complicated : 17). The category "politics and geography" seemed to be more important than the cultural category.

When asked to rank seven **characterizations of the French language** (see Table 1):

- 62.8% selected "a language of arts and culture",
- 49.8% "one of the international languages" and
- 47.4% "a key language of the European Union."

For male students, the French language is also a "language of business". For female students, this answer is the last choice.

Table 1. Characterizations of the French language

Females: The French language is:	Males: The French language is:
1. a language of the arts and culture (62%)	1. a language of the arts and culture (66%)
2. one of the international languages (47.8%)	2. a language of business (57.4%)
3. a language of technology and medicine (46%)	2'. one of the international languages (57.4%)
4. a language for tourism (45.5%)	3. a key language of the EU (55.3%)
4'. a key language of the EU (45.5%)	4. a language of technology and medicine (51.1%)
5. a language of diplomacy (41.7%)	5. a language of diplomacy (45.7%)
6. a language of business (38%)	6. a language of tourism (44.7%)

### 4.3. Reasons for studying French

Near 81% of the respondents selected the option "I think that this language can be useful" and 79.5%, "I like this language" (see Table 2). While they are concerned about its usefulness, they also appear to relate emotionally to the language. For male students, French is less attractive and seems less useful than it does for female students. Language requirements appeared to be more important for male than for female students.

As to the question of why the students considered the language to be useful, 92% said that they want to travel in French speaking countries, 72% said that they want to study in French-speaking countries and 67% said that it will help them get a job.

### 4.4. Students' expectations

When the students were asked to rank their level of satisfaction with their French classes using a 5 level Likert scale (n°1: not really to n°5: very), 57% said they were satisfied, 12% unsatisfied and 30% were moderately satisfied.

The primary reasons for this dissatisfaction were:

- The class is very routine, some of the themes of chapters are not interesting (Intermediate level).
- I'm never excited to come, monotonous; it was very repetitive and predictable. More options for class choices would be nice.

- In my few years as a student in the department, I have heard many students express complaints about course offerings. Several (...) have decided against taking more French classes or against pursuing a French major or minor because they found the course offerings to be poorly adapted to their interests and needs.

71.8% of the students think that French classes should relate more to their area of study (major, minor) for classes after the advanced level and 42% for classes at the intermediate and advanced level.

- The students have an international focus. An overwhelming number plan to work in an internationally oriented field. (...) Many students study French because of a future-oriented goal and more than half because they plan to work in a Francophone country or region. Students are not just interested in France. There is significant interest in Canada, Africa and Francophone Europe.

Respondents were asked to choose between 21 different course subjects after the advanced French level, and 75% indicated they would be interested in a conversation class, 63% in international politics and 60% in diplomatic French. Male students ranked international politics ahead of the conversation class (see Table 3).

**Table 2. Reasons for studying French**

Reasons	Both genders (239)	Females (190)	Males (49)
like the language	79.5%	85.3%	57.1%
like the culture	65.3%	69.5%	49%
degree requirement	44.4%	41.6%	55.1%
can be useful	80.8%	83.2%	71.4%
didn't have any other choice	2.1%	2.1%	2%
other	7.9%	6.3%	14.3%

**Table 3. Preferred subjects**

<b>Subjects</b>	<b>Both genders</b>	<b>Female</b>	<b>Male</b>
Conversation	75%	77.3%	66%
International Politics	62.9%	60.5%	72.3%
Diplomatic French	59.5%	61.1%	53.2%
France and the EU	58.6%	59.5%	55.3%
French Arts	56.9%	58.9%	48.9%
Francophonie	51.3%	51.9%	48.9%

**Table 4. Preferred literature**

<b>Students prefer to study:</b>	<b>Both genders</b>	<b>Female</b>	<b>Male</b>
Literature in general	75.4%	78.8%	59.4%
Related to contemporary issues	47%	43.7%	62.5%

The results show that the affective component is also important even though students are oriented towards practical matters. 75% answered that they agree with the fact that studying a foreign language also entails studying its literature. 61% of the male students agreed, compared to 79% of the female students, who seem more interested in studying literature. What kind of literature would they prefer to study? (see Table 4).

- I would like to study common texts that are considered a staple in another language
- More different shorter pieces of literature. Short stories at Elementary level
- I think that literature is necessary but not anywhere to the extent that is mandated at the university. It's the reason why I will not take more French class.
- Literature from the francophone world, like Canada, Africa.
- Male students seem to prefer contemporary subjects and female students prefer literature in general.

## **5. Contribution to Knowledge**

The top reasons for studying the French language are usefulness (80.8%), liking the language (79.5%), and cultural interest (65.3%). The students believe that French can be useful first of all for travelling (92.1%), secondly for studying in French countries (72.8%) and thirdly for their career plans (67%). Most of the respondents ranked Conversational courses number 1, ahead of international politics

subjects linked with their other areas of study that interest them. However, male students ranked international politics as number 1. They also consider the French language to be a language of the arts and culture and a language of business. The female students consider the language to be a language of the arts and culture, but they put language of business in the last position. Most of the students think classes should relate more to their area of studies and they are also convinced that studying a foreign language also entails studying its literature (75% agreed). They are asking for classic literature, contemporary subjects (particularly for male students) and literature from the different parts of the francophone world.

## **6. Conclusion**

Most of the students surveyed for this study are convinced that knowledge of languages in addition to English will be increasingly important in a globally competitive world.

Students' reasons for studying the French language are linked to their perception of this language: both an emotional and a practical perception. Most students think that French language skills will be applicable in their personal and professional lives. The Washington, DC universities studied continue to prepare future leaders in government, international relations, business and communications. In order to better serve students' needs and long-term goals, a variety of courses should be offered around thematic units related to students' interests and to their areas of study.



A balance between literature and non literature classes would attract more students: a combination of political and international subjects, current topics, culture, social issues as well as "francophone" literature (Canadian, African-specifically Sub-Saharan, Caribbean, European). Greater efforts need to be made to tap into male interests in French foreign language classes. Incorporating more topics geared toward male interests would likely change their perception that French is a feminine subject and that there are a multitude of careers in which knowledge of French can be beneficial, especially in the Washington, DC, area.

Foreign Language Annals, Alexandria, Winter 2005, Vol. 38, Issue 4, p. 544.

## 5. Future work

More detailed information will be collected through follow-up interviews with some students, especially male students and upperclassmen. Foreign language programs in general and French language programs in particular, must encourage students who express a special interest in the language to continue their studies well beyond their undergraduate studies.

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## **Session 24: Cross-disciplinary Areas of Education**

The Role of Boarding School in Work with Latvian Social Risk Group Pupils: Problems and Solutions

(Inese Patapova, Velta Lubkina, Zenija Truskovska)

Alternatives to corporal Punishment Gaining Momentum in U.S. Schools

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# The Role of Boarding School in Work with Latvian Social Risk Group Pupils: Problems and Solutions

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## Abstract

*The legal basis of boarding schools' work in Latvia is based on the Education Law of the Republic of Latvia, Law on General Education; Cabinet Regulations of the Republic and other education-regulating regulatory enactments; Children Rights Protection Law of the Republic; UNO Convention on the Rights of the Child; School regulations; Documents regulating boarding school activities being confirmed by the headmaster, etc. This paper analyzed the peculiarities of boarding school's pupils, evaluated the work specificity of the boarding school in Latvia and investigates the NGO – Family solution for improvement social risk group pupils funded by EU grants and public support. A SWOT analysis of Liepna boarding school's activity were carried out, consequently, there were determined factors that influence boarding school's activity.*

## 1. Introduction

The worldwide economic situation substantially influences Latvia and same as in other countries of Central and East Europe. The prime component of human capital's basis of abilities is education at school and parents' contribution to children education and upbringing. As a result of economy downturn, parents' socio-economic situation has sharply deteriorated. At the moment, Latvian education policy leaves social risk group pupils unattended to and the number of is increasing yearly. Pupils' social exclusion is one of today's social problems in Latvia.

The virtue of legislative acts of the Republic of Latvia and schools' documentation [1] to evaluate the specificity of Latvian boarding schools' activities and, by performing of SWOT analysis, to determine factors influencing activity of boarding schools, to develop suggestions and solution versions for their prevention; to bring up a discussion regarding problems in work with social risk group pupils and solution version in the world.

## 2. Literature Review

The boarding schools are attended by children of low income and disadvantageous families; parentless children; those who are rambling protractedly and have not acquired education accordingly to their age; children which are left for supervision of relatives because parents have went abroad for work; as well as children which have many similar problems. The boarding schools, in the same way as comprehensive schools, have several educational programs (being guided by school's specificity – comprehensive, pedagogical correction, inclusive education, special needs...) and at the same time they ensure pupils' care and upbringing for twenty-four hours [2]. The boarding school's work specificity highly differs from other comprehensive schools in Latvia, because there are three strategies – learning process, upbringing process and self-attendance process.

Despite the circumstances of economical crisis in Latvia, while living in boarding school, in accordance with existing legislation and regulatory enactments: pupils are under complete or partial national maintenance; free feeding and medical attention; textbooks and educational aids.

## 3. Analysis of Findings

The research was carried out in Liepna primary boarding school [3], [4] (Latvia), studying 105 social risk group pupils on 3 programs: general basic education, pedagogical correction and special education programs. In order to evaluate the real situation at Liepna primary boarding we considered the following potentialities to improve the life and activities of social risk group pupils using SWOT analysis:

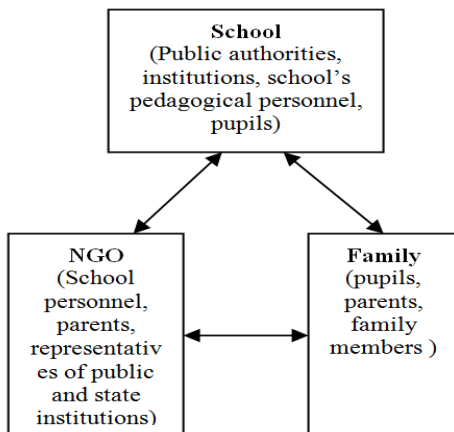
1. School's strong points, incorporation into our imaginary future project (realization of 3 programs' aggregate; participation in projects and attraction of EU funds; teachers' activity in organizing of school arrangements as well as development of teaching aids, etc.);
2. Weaknesses of school activity and the teaching plans (school supporting team (social pedagogue, psychologist, career counselor) does not work in full strength due to economic crisis, lack of

finance, society's passivity, depression and lack of support, etc.);

3. What opportunities does the school have (to promote accessibility of vocational education, improve accessibility of informal education, pupils' training for demands of labor market, integration into society etc.)
4. What barriers (threats) could appear during the realization of plans, how they shall be prevented or avoided (lack of capital investments in education, demographics, economic crisis in Latvia, etc.).

#### 4. Contribution to Knowledge

The SWOT analysis and the literature review, were used to determine factors that are influencing boarding school's activity, as well as personal experience gave opportunity to develop triangular cooperation model SCHOOL – NGO – FAMILY, referring to direct cooperation between school, NGO and family (see Figure 1)



**Figure 1.** Model of cooperation's promotion between school and family

The approbation of the model was performed on the basis of boarding school by creating NGO "Elementary Boarding School of Liepna and Pupils' Families Support Union" [4]. It works as a mediator and aim to promote cooperation between public authorities and pupils' families. The problems and solutions for pupils of social risk group in other countries.

#### 5. Conclusion

Our theoretical research investigates the legislative acts of the Republic of Latvia, schools' documentation; as a result there have been evaluated

work specificity of Latvian boarding schools on social risk group pupils. The empirical work is based on the SWOT analysis of boarding school's activity; consequently, there were determined factors that influence boarding school's activity, developed suggestions and solutions for reduction of problems.

The model of cooperation's promotion between school and family is one of the solutions for improvement of boarding school's potentialities with social risk group.

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# Alternatives to Corporal Punishment Gaining Momentum in U.S. Schools

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## Abstract

*The practice of corporal punishment is on the wane in the United States public schools. The reports and ramifications of the use of paddles, sticks and physical discomfort on students in order to enforce school rules are sobering. This is the result of the increased scrutiny under to which teachers and administrators have been subject due to this often controversial practice. Although corporal punishment is still legal in twenty of the fifty states, there has been increased interest in alternative (top down) methods of classroom management. Some states have abolished corporal punishment and reinstated it due to the perceived absence of alternatives. Realistic alternatives can be proposed and demonstrated to be effective to states that still legally practice paddling. Top-down classroom management alternative offer humane, organized guidelines to students that teach appropriate behaviors rather than merely penalizing negative behaviors.*

## 1. Introduction

According to data released in March 2008 by the U.S. Office of Civil Rights, corporal punishment was administered legally to 223,190 public school children [1]. In the 20 states in which this practice remains legal, strict guidelines are in place to protect student, teacher and administrator from cruelty and litigation. The use (and frequency of use) of a paddle, stick or physical hardship is clearly spelled out in school handbooks and web sites. School administrators report that discipline policies and procedures are adhered to before, during and after each instance [2]. Despite often strict guidelines for the use of corporal punishment, lawsuits are regularly filed by the families of its recipients due to excesses use.

## 2. Literature Review

The argument in favor of school corporal punishment is that it signals a respect for authority. It is also stated that when fear is not a factor, there is no reason for children to comply with rules and

regulations. It is perhaps for this reason that states like West Virginia for example, banned corporal punishment in the early 1990's and reestablished shortly thereafter. Spanking, it is argued, is a return to traditional values [4]. However, recent studies have shown that in states where students are spanked there have been more instances of school violence (included homicide and weapons-related violent death). This implies a disregard for a societal authority that prohibits violent behavior. There also appear to be more school shootings in states that have legal corporal punishment than in states that have banned it [5]. Students who are empowered to bring weapons to school and utilize them on their peers are not impeded by fear of consequences.

As information about this practice and its ramifications continues to reach the public spotlight, calls for its abolishment have become more vociferous. In the 1990's eight states banned corporal punishment in the schools. In the millennia, three more states (Delaware, Pennsylvania and Ohio) have signed legislation as well. When a state terminates the practice of spanking, there is the necessity of replacing it with a model in which practitioners accustomed to traditional practices can invest.

## 3. Analysis of Findings

Contemporary approaches emphasize a classroom management focus rather than discipline. Top down classroom management approaches provide schools that previously relied on corporal punishment a comfortable transition to a discipline model that emphasizes the authority of the teacher and administration without inflicting pain humiliation on a student. Classroom management is therefore achieved without completely altering a school's disciplinary conceptual framework.

Lee Canter's assertive discipline program for example, is a viable alternative in that like corporal punishment, it places the teacher firmly in charge on the classroom. Rules, rewards and punishments are determined by the teacher. Despite its humanity and authoritative philosophy, it is basically a top down approach that focuses on students who comply with school rules while providing gradations of negative reinforcement for repeat classroom offenders.

There is evidence that behavior modification programs and applied behavior analysis for extreme disciplinary cases can also provide viable alternatives to the traditional disciplinary model.

#### **4. Conclusion**

In view of the trends, the top down discipline focus is a realistic first step for states that abandon corporal punishment. Imposing millennial styles of student centered classroom management before schools are ready can be a set up for failure and a return to traditional discipline. States that have never sanctioned corporal punishment for example, advocate contemporary classroom management programs such as cooperative and positive discipline, Forrest Gathercoal's, Judicious Discipline. These programs place the onus of behavior, rewards and consequences on the students and community. Teachers, administrators and students work together cooperatively to conceptualize discipline in the educational environment.

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# Indigenous Education: Teacher Identified Challenges and Issues for Teaching Aboriginal Students

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## Abstract

*Schoolteachers face issues and challenges when they teach Indigenous education and Aboriginal students in their classrooms. A sample drawn from two recent studies includes four non-Aboriginal teachers--male and female, with varying degrees of experience in the classroom--who taught from primary to high school within public and reserve schools. All participants taught Aboriginal students. Researchers from both studies used interviewing methods. Their collaborations across their studies found commonalities in teachers' perceptions and experiences when they confronted Indigenous education in their classrooms. Teachers' common stories crossed differences of gender, grade level taught, years of experience, and urban and reserve-based school settings. The researchers found that teachers generally expressed frustration over their difficulties teaching Aboriginal students and their inability to connect with Aboriginal students, their families, and communities. These teachers viewed Aboriginal students deficiently and attributed cultural differences, based on factors external to themselves and their practice, to explain the lack of Aboriginal students' success in their classrooms. The researchers conclude that teachers did not receive adequate training for Indigenous education. They lacked relational understandings [1] and knowledge of how to teach Aboriginal students/subject materials. Further research on preservice and inservice teacher training is needed.*

## 1. Introduction

What are the issues and challenges that teachers confront when they teach Aboriginal students? In two recent studies, one on Aboriginal students' identifications with public schooling, the other on teacher preparation for teaching literacy, the researchers, Leisa and Laurie, found similarities across their studies, particularly on teachers' stories and the ways in which these stories illuminated teachers' classroom praxis. Teachers' praxis, often punctuated by unintended racism, illuminated gaps

in their understandings of the theories and practices related to Indigenous education.

## 2. Literature Review

Within the context of public education, Indigenous education is broadly conceived. Indigenous education involves the teaching of Aboriginal and non-Aboriginal learners. It includes the Aboriginal subject materials that are taught within schools [2], [3]. Understanding in-service teachers' knowledge of and ability to teach Indigenous education in the classroom without reproducing stereotypes and addressing racism is a central issue for teachers. In Canada, educators, school boards, and ministries of education are engaged in intensive efforts to support Aboriginal students in public schools and classrooms. The complexities and challenges associated with initiatives for improving Aboriginal student graduation rates and emphasizing Aboriginal subject material are influenced by several teacher factors: knowledge levels, lack of confidence in skill and strategy use, and unintended reproduction of stereotypical representations [3], [4].

A number of additional factors, beginning with increasing Aboriginal populations in public education systems, further compound the difficulties associated with supporting Aboriginal learners. Challenges, specifically related to teaching Aboriginal students, which include higher retention rates for Aboriginal students; and lower Aboriginal graduation rates, are addressed by Battiste [1]:

First Nations youth have the highest school departures before graduation, the highest suicide rates, highest incarceration rates, and perform far below the achievement and employment rates of average Canadians. They continue to have the highest rates of infant mortality and family social problems. These facts are often repeated in Canada, but little is known about First Nations learning, development, knowledge and language for much of the research has focused on their

‘incapacity’ and little on their potential for influencing positive transformations in their own and in Canadian society in general. In fact, Canada and its provincial curricula has continued to marginalize or be indifferent to First Nations peoples, since their political legacies has divided their interests and the created hegemonic power relations evident in colonization, racism and domination which continue to effect First Nations present and future.

Delpit [5] suggests that helping teachers cope with deficits they see in their Indigenous students begins with reframing their perspectives. She explains that the difficulties that teachers face, particularly teachers whose experiences lie outside the cultural or class backgrounds of their pupils, may be tied to their inability to recognize their students’ strengths.

Grant and Gillette question, “When will we, as a society and as a profession, acknowledge and affirm that all students can learn and achieve...?” [6]. The researchers suggest that greater teacher investment in the teacher / learner relationship is needed if education is to become more responsive to Aboriginal learners. They assert that “culturally responsive” teachers must:

- Believe that all students can achieve and hold high expectations for all learners
- Build a “community of learners” in the classroom and connect with students’ families
- Be learners themselves and vary instruction to meet the needs of students
- Know that students have a wealth of skills and knowledge and use these in teaching
- Be willing to be introspective about themselves and their teaching, monitor their beliefs and actions for bias and prejudice, and
- Be unafraid to teach about the “isms” .

Battiste [1], Delpit [5], and Grant and Gillette [6] argue that models of Indigenous education that view Indigenous learners as deficient (or deficit) in their knowledge and skills continue to marginalize Indigenous learners by ignoring or misrepresenting their cultures and devaluing their potential for positive contribution to society. Toulouse [7] asserts a need for teachers to assume greater responsibility for Aboriginal students’ lack of success within schools.

Where researchers share general conceptions of the components that need to be included in more progressive models of Indigenous education [6], [7], [8], little or no information is extended regarding programming for supporting Aboriginal students within the classroom on a daily basis.

### 3. Teacher Stories

In her study, Leisa interviewed 5 non-Aboriginal, public high school teachers and administrators, 1 male and 4 females. These educators had a minimum of seven years’ teaching experience. Two of the teachers had taught previously in First Nations communities. In her three-year longitudinal study, Laurie followed 5 non-Aboriginal, primary school teachers (Grades JK to 4), 1 male and 4 females, from preservice through to year two of inservice education. All five novice teachers accepted positions teaching Indigenous students, three in public schools within predominantly Aboriginal communities in year one of inservice teaching, four in year two.

Teachers’ perceptions of Aboriginal students include the following stories:

- *And so they [Aboriginal students] just don’t have the richness of vocabulary, I don’t know how much reading they do. And I don’t know if they have a second language because it takes so long to get to know them, or actually English as a second language even, but they don’t seem to be very strong. Particularly the kids who are coming from the remote communities. (Heather, teacher participant from Leisa’s study)*
- *Our other problem with multicultural picture books and first nations stuff is there is no group that is more racist and hateful of their own than folks on reserves. They hate all that quote Indian crap. They don’t want to have anything to do with it.*
- *There’s a real resistance with kids with anything native. Any time we have tried to bring in anything, the parents will call up in arms, ‘what are you doing. We want them to get along in the real world.’ (Don, teacher participant from Laurie’s study).*

Teachers’ ability to connect with students and their communities include the following stories:



- Generally speaking, I just don't feel connected in any way to any of the Aboriginal students. [Name] I do. I mean she's a delight. It doesn't, I mean, I don't care. She's just a keener; as a teacher you just love students like that. But any of the Aboriginal students, I don't have a relationship with them. If I walk down the hall and none of them would say hi to me, "[h]i Mrs. [her name]", nope. If I saw them personally they might say hi. Then, I think that there's, I've had, mostly girls, and their parents or people that they board with that I think enable them. Maybe there's times when they go home, maybe back to their reserve, and they miss a whole week of school. I, we dealt with that quite a lot. Like I didn't want to come to school today, and I'm like well... I mean, I don't care whether you're a boy or a girl, or Aboriginal, or whatever culture, there are just certain rules and the expectations are that you're in school unless you're really sick. So, what do you do, I mean, you get notes and some people say that it's okay. They're from a family physician. (Andrea, teacher participant from Leisa's study)

- Yes. It's huge, the parents were just a huge challenge up there. They all hate schools, they hate teachers, that kind of thing, or just having an extremely difficult environment. (Don, teacher participant from Laurie's study)

Stories on effectiveness of teachers' programming include:

- ...it's mostly girls that I have in the parenting class, and the Aboriginal girls are pretty much all failing...I think they're [the Aboriginal female students] in denial that they're failing because they just don't hand anything in...They never, ever, ask for help (Andrea, teacher participant from Leisa's study)

- Right now it's just trying to expose them to, um, things like Hans Christian Andersen, the classics, just because there's so much in the rest of our culture and literature that relates to those things and these guys haven't had any exposure to that as an upbringing. I mean you're dealing with a community up

there, where, you may see it as the norm down here to see things like Polka Dot Door and Dora, the Explorer and Sesame Street, I mean kids grew up on that. My kids did. Up there, uh uh, I mean it's mostly parents watching pornography off the satellite dish. That's what the kids get. (Don, teacher participant from Laurie's study)

- I was teaching one afternoon, on a particularly 'bad' day, when one of my students told me that she was 'dumb' and 'bad'. I couldn't believe what I was hearing, especially when other students started to agree with her, telling me that they were from a 'bad' reserve, and were therefore 'bad kids' and 'bad at school'.

I stopped what I was doing, and asked the students to stand up on their chairs. They couldn't believe it (because I would NEVER let them do something like that on a regular day!). I asked the original student to turn and tell the class that she was a 'good kid'. She turned around, and quietly grumbled, "I'm a good kid." I asked her to repeat it in a strong, believable voice, and she yelled out 'I'M A GOOD KID!' Then, we went around the whole class, and each student yelled 'I'm a good kid.' Finally, they all yelled it together. Then the bell rang, and they left for home. (Sandra, teacher participant from Laurie's study)

#### 4. Discussion

An undercurrent of frustration ran through each of the teachers' stories. Teachers perceived that there were difficulties teaching Aboriginal students and expressed not knowing how to overcome these difficulties. Teachers' perceptions revealed their deficit notions of Aboriginal students' knowledge and skill levels as well as misunderstandings about Aboriginal valuing of culturally based subject materials.

Generally, teachers recognized their inability to connect with Aboriginal students, their families, and larger communities. Teachers attributed blame for this disconnect to factors external to themselves and their teaching methods. They identified cultural difference as the reason for their own disconnect and for lack of Aboriginal student success in their classrooms. Delpit [5] explains that teachers who

familiarize themselves with aspects of a child's culture are better able to assess that child's competence. She maintains that the cultures of marginalized groups tend to be either "ignored, misrepresented, viewed from an outsider perspective, or denigrated". Teachers, like Don and Andrea, are so focused on cultural differences they refuse to recognize their students as capable learners [1], [5] and understand the importance of family and community for Aboriginal students' success.

Schick and St. Denis [4] suggest that attributing failure to cultural differences prohibits teachers from moving beyond these differences to examine their own biases and praxis. The researchers identify these biases as systemic racism within schools. They explain that teachers (un)consciously reproduce systemic racism through their relationships and teaching methods and practices.

According to Solomon, Portelli, Daniel, and Campbell [9], the pain of not addressing systemic racism causes substantial and far-reaching damage:

The reality is that racism hurts all of us. For those of us who are racialized, the sources of discomfort and suffering originate from multiple sites, the physical, the economic and the mental, to name but a few. However, the pain of not addressing racism is all the more dangerous particularly in educational spheres where the minds, subjectivities and futures of minoritized youth are influenced by the information present in the curriculum and in the interactions with their teachers.

Sandra's story illustrates the ways in which students internalize systemic racism, labelling themselves as 'bad kids from bad reserves' and the potential for teachers to interrupt the perpetuation of racism.

### 3. Conclusion

Based on the participants' stories from the research samples and the literature reviewed, teachers did not receive adequate training to engage Aboriginal education and students. Teachers who taught outside of their cultural norms could not move beyond cultural difference to effective praxis. They lacked basic relational understandings [1] and knowledge of how to teach Aboriginal students. They did not bring Aboriginal subject materials to their classrooms [3]. The specific nature of the pre-

service and inservice training to which teacher candidates and inservice teachers need to be exposed remains largely underexplored and requires further research.

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# ***Intra- and Inter-cultural Issues in Teaching a Foreign Language: The Case of Cypriot Greek and French Languages***

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## **Abstract**

*The Common European Framework of Reference or CEFR has become increasingly important in the curriculum across Europe for foreign language teaching (CEFR survey 2006). Glossaries and lists of vocabulary are suggested in textbooks published under the auspices of the CEFR in order to fulfill European levels of lexicological requirements for each language taught. This framework (paragraph 1.6.2) encourages as well local users to adapt the given framework to their own local needs. Indeed a recent survey (2006) noted that one of the main drawbacks is the lack of contextualizing the lexicon suggested by the textbooks such as the Référentiel, the official guide of the CEFR. A first study based on questionnaires confirmed the need for contextualization of the lexicological requirements within the Greek-Cypriot community. However interviews were needed to clarify lexical choices and to compensate the lack of use of the vernacular in the written answer sheets. Our next step was then to analyse oral data gathered in 2010. This paper outlines the results obtained with this new oral component in our project.*

## **1. Introduction**

It has been established that students should not only acquire the target language but must also learn about the target culture [5], [17]. Indeed, one of the key tasks is to bring the learners to an understanding of those L2 concepts and values which form the interpretive frames within which L2 individuals negotiate meaning. The goal is then for learners to become what Byram et al. call an 'intercultural speaker', i.e., a speaker who has the ability to engage in intercultural encounters with others, accept and mediate different perspectives, and be conscious of his/her evaluation of difference [5]. To reach this goal of interculturality, different strategies have been developed [15]. In these strategies, students must also be given the opportunity to explore their own native language and culture, so as to effectively compare it with the target language and culture. In effect, cultural analysis in the classroom always assumes a contrastive dimension as students become reflectively aware of how their own concepts and values compare and contrast with those of the L2 culture [12]. In our view, this

reflexive stage is the most important phase for those students who live in a very dense and homogeneous community. In order to foster cross-cultural communication, building this intra-cultural knowledge seems fundamental before thinking of interculturality.

Therefore we examine how the linguistic and cultural aspects of verbal behavior are intertwined, and how differently they are so interrelated in the French and Greek-Cypriot communities in relation to the expression of emotions. After a descriptive approach, we work on the theoretical and pedagogical implications the obtained data may provide. Language is considered in this project to be at the core of psychological constructs, and our first focus is on the use of vocabulary through which emotions are described and catalogued in particular cultures. We focus, then, first on the lexicon. This first step will lead to the study of cultural conceptualization, including conceptual metaphor, behind linguistic expression in the context of second language learning and teaching.

Our preliminary study [2] based on free associations allowed:

- To *identify* the mapping of linguistic forms to the cognitive feelings, i.e., to identify associative networks relative to basic emotions for both communities.
- To *contrast* the results obtained in both communities.
- To *compare* our findings with the data and guidelines provided in the Common European Framework of Reference for Language Learning.

Two other steps are in progress:

- To *suggest* adaptations and possible additions to the given lexical fields in relation to communicating (the studied) emotions.<sup>1</sup>
- To *register* our findings in the digital Greek Cypriot dictionary [13], thus starting an associative dictionary.

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<sup>1</sup>These lexical fields were sketched in the *Référentiel* for teaching French (level A1 - A2 and B1 - B2) and should be then clearly defined for learners and teachers.

## 2. Theoretical background

Extensive works in cross-linguistics and cross-cultural emotions carried out by Pavlenko [21] have shown the complexity of working on the mapping of form to meaning in monolingual and bilingual communities. Our aim is to define the cultural specificity of Cypriot Greek versus French when relating to emotional states, in order to target the lexical needs specific for each culture and to be taught in language classes. As such, these social norms could be explicated by means of what Wierzbicka called ‘cultural scripts’ [31].

### 2.1. Targeting lexical needs in language classes

The theoretical underpinnings of this study are social-constructivist i.e. we believe that a coherent study on lexicology should include a strong cultural and linguistic component [20]. Indeed, different associations made by native speakers of different languages can also be considered as ‘markers of culture. According to Leontiev [16] and Vygotsky [29], these markers carried implicit social norms and values as much as national stereotypes. In mapping cross-cultural emotions we inevitably encounter the problem of conceptual equivalence. A word equivalent is not a conceptual equivalent as Panayiotou [20] revealed in her work on shame in Greek and American English. Therefore in the case of partial equivalence, when two or more categories of one language are subsumed fully or partially in another language within a larger category, we have a relationship called nesting [19]. For the domain of emotion that we will study, the concept of love is an example of this complexity. The concept of nesting is described in Stepanova et al. [26] for the English “jealousy” and the Russian “revnost”, and in Gladkova [11] for the English “sympathy”, “empathy” and “compassion” and the Russian “sočuvstvie”, “sostradanie”, and “sopereživanie”. How to capture in a rigorous way the complexity of these partial equivalences, the boundaries and the overlapping of each translational concept?

### 2.2 Improving intra and intercultural knowledge in language classes

When the words are taught, concepts are first defined in a “neutral metalanguage” [30], [31], as far as the generic definition is concerned. For instance, the concept “love” will always be defined as an emotion or as a feeling. Indeed, most words are not culturally neutral and therefore when used in a theory, they will bring with them certain culture-specific ways of thinking [12], [30]. Working from a

small zone of ‘culturally neutral words’ shared among all languages (called *semantic primes*), this lexicon can be used to help decode and articulate the semantic content of culture-specific words. Within the Natural Semantic Metalanguage approach (NSM), emotional terms are explained first with reference to a prototypical cognitive scenario that gives rise to a certain way of feeling) and then allow to explicit associations made with “love” for such or such culture, but in ‘neutral’ language [11]. It allows researchers to distinguish one emotional term from another, to specify its meaning, and to demonstrate its cultural specificity. This approach is consistent with the view held in cultural psychology, which posits that emotional concepts can be decomposed into “script-like or narrative” slots [8], [26].

Since in this MSN framework linguistic associations can define associative networks, we then work on cultural stereotypes which are quite important for small and dense communities such as the Cypriot community, rarely the topic of textbooks. For instance associative dictionaries are readily available for French<sup>2</sup>. Indeed our study confirmed that most of the given associations found in CRISCO dictionary provided by the University of Caen are used by our informants. As far as the Greek-Cypriot language is concerned, our study compensates the lack of such dictionaries: to our knowledge, recent works on the linguistic construction of emotion (Terkourafi and Bali 2007) focused on mainland Greek. However, expressing emotions may be different for Cypriot-Greek, especially when working from and within a social cultural framework. This study can then contribute to a greater intercultural understanding in the classroom but will also be useful to prepare exchange students within the Erasmus or Socrates programs for their stay in both countries.

### 3. Case study: “γάπη” (love), “ερωτάς” (romantic love), “πάθος” (passion)

The first of our case study, carried out in 2008 and 2009 within the student communities in France and in Cyprus<sup>3</sup>, revealed differences in cultural keywords, amounting to 30% of the data collected. Distribution differences of the same keywords were also noticed. The spontaneous written associations were obtained by showing students a picture embodying a specific emotion such as love or fear, and as well as recording their reaction to the spoken or written words in their native language (such as *love, joy or fear*). Here we limit the discussion to the results obtained with the verbal cue and for the concept of “love”.

<sup>2</sup>See the online CRISCO dictionary created by the University of Caen at <http://www.crisco.unicaen.fr/>

<sup>3</sup> Students with a proficiency level A1 - A2 and B1 - B2 in the CEFR framework. We worked with roughly 200 questionnaires in each country, for the two languages and for the same emotion.

### 3.1 Describing emotions such as “αγάπη” (love)

In Baider and al [3] the metalinguistic discourses have been described regarding the concept of love in Greek and in French. Greek-Cypriot dictionaries do not present differences with the Greek dictionaries. Bambiniotis [1] for the Greek language and Louka [18] for the Greek Cypriot languages give the more comprehensive definitions which describe our main findings. The word *αγάπη* was first explained as first a synonym for *έρωτας* and therefore it expresses a strong physical attraction and second as a synonym for tenderness, with the connotation of protection and support, connotations unknown to the word *έρωτας*. The French word *amour* comprises, traditionally, two concepts in Greek: “αγάπη” (love) and “έρωτάς” (romantic love) [28].

### 3.2. Expressing emotions

However our data show an even more complex picture: Cypriot-Greek speakers associate *αγάπη* (love) in its generic sense with *ερωτάς* (love in its romantic sense) and less often with *φιλία* (friendship), more rarely with *πάθος* (passion). In contrast, French speakers associate *amour* (love) firstly with *passion* and then with *amitié* (friendship). Therefore four Greek concepts (and not two) seem nested under the category *amour* (love) for French: “πάθος”, “έρωτάς”, “αγάπη” and “φιλία”. The collection of our own synchronic data was important since it enables us to control the ‘Greek-Cypriotness’ of our data; the same goes for French. Online discussion forums could be interesting and have been used for such studies), but it is always difficult to assess whether the writer is Greek or Cypriot, French from France or from Canada, etc. Moreover similar studies regarding Associative networks involved questionnaires, hence our choice of working first with this type of tools [9], [27].

Our first database included list of nouns, adjectives or adverbs, phrases and sentences, and even paragraphs, but in our pilot study we focused on NP (nominal phrases) and therefore on lexical semantics. Table 1 compares the associations for both communities with the word love, *amour* or *αγάπη*.

## 4. Analysis

Differences in conceptualizing the words examined can be explained by referring to the different models of social interaction in French and Greek-Cypriot cultures, as well as different cultural attitudes towards emotional expression. These differences could be described using Hall’s theory on high and low context cultures and they were also

described in works specifically related to relationships and interactions in the Greek - Cypriot society [7].

### 4.1. A Sociolinguistic explanation

If we take the feeling of love as an example, the majority of answers is similar for both communities and consists in the semantic features found in standard lexicographical definitions. Both corpora define love as a generic feeling of erotic love (*ερωτάς* and *passion*), but they also characterized love with the word *happiness* (*ευτυχία, τρυφερότητα* for Greek and *bonheur, tendresse, joie* for French) and *understanding* (*κατανόηση, φιλία* and *amitié*). They both qualify this relationship by its intensity (*passion, tenderness* and *softness*).

However, *differences* have also been noted and have defined what we have called “intra-culturality” [4]. Indeed if the associations for *amour* for French informants comprise infatuation (*aventure*) and brevity (*éphémère*), in contrast, for Cypriot informers, *αγάπη* and *έρωτας* relate to family and marriage (hence, duration). The presence of the concept *ασφάλεια* (safety) and the importance of *οικογένεια* (family) reveal another difference in the Greek-Cypriot data compared to the French data, family ties being another important issue in Cypriot life. Religion (*θεός*--God) was found to be related to love in the Greek-Cypriot data, but this was not true for the French data either. Culturally, the island of Cyprus is recognised as a family island, and the relationships between the two sexes are still strongly influenced by marriage and, indirectly, by orthodox religion (Cockburn 2004). The associations relating “love” to “sexuality”--even though the questionnaires provided complete anonymity-- are almost nonexistent in the Greek-Cypriot data.

Close networks and avoidance of being alone (the concept of *παρέα* “company”, to be in the presence of others”) is very important in the Greek-Cypriot social life. Similarly, while both communities mentioned social circumstances such as “failure” and “loneliness” as sources of “fear”, these social circumstances are four times more prevalent in the Greek-Cypriot data (13.5%) than in the French data (3.5%). As said before, this may be typical of what Hall (1976) called *high context society* and *culture*, in which social relationships are culturally dense, social networks intersect and most relationships are seen as long-term relationship.

Since in such a society the boundaries are strong, it is difficult for outsiders to penetrate such a context. Another difference involves the presence of words related to problems inherent to relationships such as *suffering* (*souffrance*), *jealousy* (*jalousie*) and its lack of duration (*éphémère, aventure*) in the French data. These difficulties/problems are not mentioned in the Greek - Cypriot corpus.

Table 1. Conceptual associations: "love"

Greek-Cypriot speakers	French speakers
58% of the occurrences are spread over these lexical items: <i>ερωτάς</i> "erotic love" (6%) <i>ευτυχία</i> "happiness" (4.5%) <i>οικογένεια</i> "family" (4%) <i>τριφερότητα</i> "tenderness" (4%) <i>χαρά</i> "joy" (4%) <i>κατανόηση</i> "understanding" (3%) <i>φιλία</i> "friendship" (2%) <i>ασφάλεια</i> "safety" (2.5%)	40% of the occurrences are spread over these associations : <i>passion</i> "passion" (4%) <i>bonheur</i> "happiness" (3.5%) <i>tendresse</i> "tenderness" (3.5%) <i>sentiments</i> "feelings" (3%) <i>couple</i> "couple" (2.5%) <i>famille</i> "family" (2.5%) <i>joie</i> "joy" (2.5%) <i>amitié</i> "friendship" (2.5%) <i>sexualité</i> "sexuality" (2%)

#### 4.2. Teaching FLE and Greek

Following the steps of Terkourafi and Bali working on the linguistic expressions of pain, our study also identified the frequency of usage for the different expressions of "love" within different grammatical categories, such as lexicalised in a verb, as a verbal complement, as the verb's subject, as an inference from the utterance [27]. Our written data highlight words and expressions that are used the most frequently and which could be given priority in languages classes. They also pointed out which syntactic structures are more likely to be used when expressing emotions. For example, expressions involving transitive verbs such as *faire un câlin* (to cuddle) and *avoir des sentiments* (to have feelings) are the most frequent data found in our corpus but are not found in beginners FLE textbooks (French as a foreign language) or in the *Referentiel*. Thus, our study was useful to help complete glossaries for learners for active and passive knowledge of the lexicon related to the emotions.

#### 5. Oral data

We started to collect the oral data end of 2009 and we will be finishing by April 2010. We did not want to proceed with formal interviews: when speaking about emotions, one has to be in a relaxed and friendly atmosphere to express spontaneously one's feelings. Small group of students (5 people) took part in a discussion and had to tell what they thought was their most important love in their lives and these discussions allowed us to draw data missing for Greek-Cypriot. Indeed the diglossic situation in Cyprus means that Standard Modern Greek is generally used for writing, as it is considered more or less formal and may also entailed more distance with the topic described.

#### 5.1 Data for "love"

For the concept "αγάπη" « love » in its generic sense, identical associations were found as with the written data. Differences for the same language occurred in frequencies of usage. For instance *έρωτας*, which describes in Greek the physical aspect of love, was less frequently used in the conversations than in the written data. Differences with the French data were still present. For instance the lessened expression of sexuality compared to the French data is still valid although within the conversation it appeared more consistently than in the written questionnaires. Perhaps the academic setting for the study carried out with the questionnaires inhibited as well the students at the time of the survey in 2008.

However, an emphasis on the togetherness and on the couple life (and not only on the family life), with the strong presence of words such as *συντροφικότητα* "solidarity", *συνύπαρξη* "union", *καλοσύνη* "kindness" drew the Cypriot data closer to the French ones. Therefore these semantic fields could be the first ones to explore when teaching the language: students sharing common grounds can draw more easily lexical connections from these similarities than when starting with less shared concepts.

Associations which distinguished the Cypriot community from the French in the previous written data were still present: *οικογένεια* "family" and *ασφάλεια* "security" were preeminent in the Cypriot discussions, while in the French questionnaires they were less important. These semantic fields would be very useful to explore for Erasmus and Socrates students exchanges since these differences define the work to be done as far as "inter-culturality" is concerned. New associations appeared such as *αλήθεια* "truth" and *ελευθερία* "freedom" which may point towards a change in the Cypriot culture

regarding relationships, if we consider the results found in the section 4.1 above.

## 5.2. Theorising love

In the MSN framework, Gladkova identified the precise conceptual differences between the English words *sympathy*, *compassion*, and *empathy* and the Russian words *sočuvstvie*, *sostradanie*, and *sopereživanie*, which are regarded as their translational counterparts [10]. She concluded that the differences between the English and the Russian concepts are mainly related to the degree of familiarity between the experiencer and the target person. Other differences in meaning are associated with the degree of emotionality expressed with each word. The following proposed formula within the MSN framework would capture the meaning of *sympathy*:

### [A] *sympathy*

- (a) person X thought about person Y like this:
- (b) something bad happened to this person
- (c) this person feels something bad because of this
- (d) it is not good
- (e) I don't want people to feel bad things like this
- (f) when X thought like this X felt something
- (g) like people feel when they think like this about someone

The structure of the proposed explication reflects the view that the meaning of an emotion term has a component (components f-g) indicating a feeling which is caused by a particular way of thinking (components a-e). The element 'like' in components (f-g) signals that the explication refers to a prototype of a feeling. This Explication [A] shows that *sympathy* is caused by thinking that something bad happened to someone else and this event led to that person's negative feelings (components b and c). This situation receives a negative evaluation (d) because the person does not want people to experience such bad feelings (e).

Comparing Russian usages of the word *sočuvstvie* supposed to be the equivalent of *sympathy*, Gladkova found several differences. For instance she did not find examples in the English corpus where *sympathy* elicits thanks, whereas she found such data for *sočuvstvie*. The data also show a greater degree of 'closeness' between the experiencer and the object in the Russian expressions: the experiencers know through their contact with the person that something bad has happened to him or her. This indicates that the English word *sympathy* does not entail 'outward expression of the feeling', and thus it differs from the Russian *sočuvstvie*. She then puts forward the following semantic description of the word *sočuvstvie*:

### [B] *sočuvstvie*

- (a) person X knows that something bad happened to person Y
- (b) X knows that Y feels something bad because of this
- (c) when X thinks about it, X feels something bad
- (d) at the same time X thinks about Y like this:
- (e) I don't want this person to feel bad things like this
- (f) because of this, I want to do something good for this person
- (g) when X thinks like this about Y, X feels something good towards Y
- (h) X wants Y to know this

As Gladkova explained that the choice of the prime KNOW rather than THINK (as used for English *sympathy*) [11]. Component (c) refer to the 'painful' sensations associated with *sočuvstvie*. Component (d) indicates that a parallel mental activity develops in the experiencer's mind – the experiencer wants to stop the person from experiencing the negative emotional state (component e) by doing something good for that person (component f). This way of thinking is associated with a positive attitude towards the other person (component g). The desire to express this attitude to the one in trouble is captured in component (h).

Drawing from this type of work, cultural scripts for the Greek Cypriot would differ from the French cultural scripts. Working from our data we would include, for instance, the degree of "physical closeness" and the degree of "feeling protected" in the definition of *amour* and *αγάπη*. These cultural additions to the generic definition must also take into account the fact that the physical aspect of a love relationship had been found consistently as being more present in the French data than in the Greek Cypriot data. Whereas in the Greek Cypriot culture, protection and safety, as far as our two pools of oral and written data are concerned, are keys to a love relationship. We have not yet enough data related to literary works and contemporary prose to write our own cultural scripts but we are in the process of collecting them. Hence knowing these cultural scripts would allow a better understanding of both communities and would contribute to a more targeted lexicon in language learning.

## 6. Conclusion

Our research results cover lexical semantics, cross-cultural communication and language teaching. Since we adopt a social-constructivist framework, we showed that a coherent study on emotion should include a strong cultural and linguistic component [20]. The example of *love* shows how we can identify the most important lexical fields, which in turn, define the type of vocabulary that merits further exploration and usage.

Second the students in the interviews were able to make sense of their answers and reflect on their assumptions of what defines the emotion discussed at the time. Our data highlighted those words and expressions that are used most frequently and which could be given priority when teaching French as a Foreign language as well as which syntactic structures are more likely to be used when expressing emotions. Thus, our study would be useful to help complete glossaries for learners for active and passive knowledge of the lexicon related to the emotions.

In terms of cross-cultural communication, the associated thoughts and social practices related to *αγάπη* and *έρωτας* have been studied in sociology for the Greek-Cypriot community [7]: the implicit linguistic representations and the explicit socio-cultural aspects could be but two sides of the same coin. The knowledge of these differences anchored in two worldviews and delineated in the lexicon could also enable a reciprocal or cross-cultural *identification*. In fact, the CEFR describes this knowledge as one of the complementary tools “to be developed to encourage students to exercise independent critical faculties including to reflect critically on their own responses and attitudes to experiences of other cultures” [6].

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## **Session 25: Cross-disciplinary Areas of Education**

Developing Strategic Model of Korean Civic Education by Participating in IEA's International Civic and Citizenship Education Study  
(Tae-Jun Kim)

Business Communication in the Virtual World  
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# Developing Strategic Model of Korean Civic Education by Participating in IEA's International Civic and Citizenship Education Study

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## Abstract

This study is to examine a level and a phase of civic and citizenship education in Korea by participation in International Civic and Citizenship Education Study (ICCS), which is managed by International Association for the Evaluation of Educational Achievement (IEA) and to plan to establish strategies and programs for civic and citizenship education in Korea by analyzing policies of civic and citizenship education in the Western and Asian countries. This paper refers to the progress phase of the research, which is completed by 2010 to attain its purpose.

## 1. Introduction

ICCS used consensus of about 40 countries to conceptualize thematic domains of citizenship for young people. The thematic domains include democracy, national identity, regional/international relations, social integration, and diversity. The following diagram shows IEA's conceptual paradigm for citizenship. Each domain measures interpretation skills of civic knowledge and information, understanding of nation and the government, attitude against political rights of immigrants and women, civic engagement, and political actions.

Korean ICCS divides into two parts; international cooperation research sector (the first part) and national research sector (the second part). The first part describes preparation for the main survey, its operation and the groundwork of the ICCS 2009 report. The second part analyzes a concept and a theory of civic and citizenship education in the first phase, the outcomes of the case studies of civic and citizenship education in the Western and Asian countries and the analysis of the data of the Asian Regional Pilot Survey.

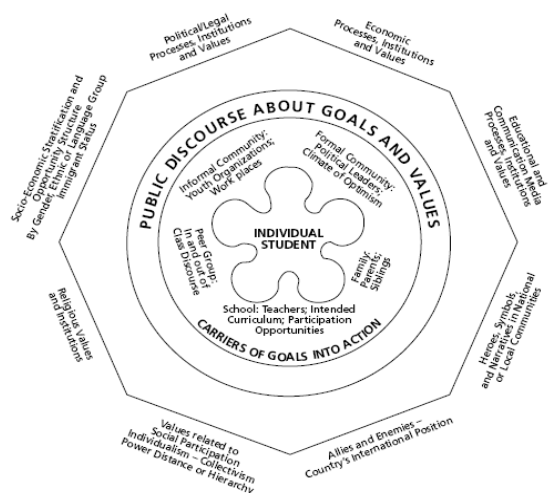


Figure 1. Citizenship Paradigm to Forming Social Capital

To proceed the ICCS 2009 Main Survey, firstly, the assessment instruments have delicately been developed, adapted and translated. Secondly, the survey has been administered. Thirdly, the data of the responses have precisely been punched and exhaustively verified. The ICCS 2009 assessment instruments have been developed through the meeting, in which the IEA staff and the ICCS National Research Coordinators (NRCs) participated. The content Domains are divided into the four parts; 'Civic Society and Systems', 'Civic Principles', 'Civic Participation', and 'Civic Identities'. There are the Affective-Behavioral Domains to distinguish the different types of student perceptions and behaviors and the Cognitive Domains to assess the level of students' knowledge and achievement. With these components of the concept, the ICCS 2009 assessment instruments are composed of 6 kinds of questionnaires; International Cognitive Test, International Student Background Questionnaire, International Student Perceptions Questionnaire, Teacher Questionnaire, School Questionnaire, Regional Module Questionnaire. The assessment instruments and the manuals for the main survey are adapted and translated by the KEDI researchers and the translators. They are examined, revised and verified by the IEA.

## 2. Contents and Methods

The ICCS 2009 Main Survey in Korea has been conducted in May this year according to the timeline for Northern Hemisphere countries. The Sampling for the Main Survey is carried out by the IEA Data Processing Center (DPC). Under the sample selection procedure, 150 schools and the replacements were selected. According to the selection procedure of classes, students and teachers provided by the IEA DPC, one class in each selected school, equivalent to 5,348 students and 3,069 teachers, was selected through the WinW3S software.

The instruments for the ICCS Main Survey were classified by each school, packed up by each box and delivered a week before the testing data of each school. For better quality of the ICCS 2009 Main survey, firstly, the training program for a school coordinator and a test administrator of the selected schools are held. Secondly, the quality control monitors are selected and trained by the IEA. They visit 10% of the selected schools for inspection and report the state of its operation to the IEA. As the Main Survey in Korea is administered and cooperated with the Ministry of Education, Science and Technology, it is enforced with the help of the office of education in cities and provinces from May 11th to 22nd in the year of 2009. All of the tests of the selected schools are well organized and the number of the students participated in the test are 5,251 students out of 5,348 students, reaching at the rate of 98.18%.

The data from the open-ended response are scored and the occupational questions are coded by training the scorers and coders according the scoring guide and ISCO-88 Manual provided by International Study Center (ISC). Double scoring and double coding are suggested and operated to verify the reliability of the open-ended response scoring and the occupational coding. After preparing the data of whether students, teachers and principals are participated in the test and returned the questionnaires, the testing date, language and the position of the test administrator, a data manager entered them into WinW3S. Then the data from the instruments of the Main Survey are entered into the data file through WinDEM. As a result, six data files and one occupational coding file are created and all of the entering data are verified. These data files must be submitted to the IEA by August 25th in the year of 2009 and should be developed through the exchange of idea between the NRC and the IEA.

The second part of this study analyzes the concept of the civic and citizenship education and examines the case studies of civic and citizenship education in other countries to obtain the implications of the civic and citizenship education in Korea. Through the analysis of the concept of civic and citizenship

education inside and outside of the country, the research finds out the implications that the strategy of civic and citizenship education in Korea should be developed on the basis of the model of citizenship promotion in developmental stage of life, which is described by micro(individual), middle(community), and macro(national, global) level.

After reviewing the continent of Europe and America's case as the case study of the Western countries, the study finds out that the policies of civic and citizenship education are intensified in Europe to improve communality competitiveness for European societies and to coexist with the groups, which are gradually pluralized and diversified. For the continent of America's case, a level of civic education in the start is low, as America considers economic principle as the most. In contrast to this beginning, the policies of civic and citizenship education have considered social activities, history and geography, understandings of the different culture as key elements and have been reshaped in accordance with the recent changes of the international environment.

In Asia, the policies of civic and citizenship education have renovated democracy, whose meaning is undermined due to the historical subordination to the strong countries. The policies have strengthened national identities corresponding to globalization, which increases the cultural exchange among nations and have developed various programs for civic and citizenship education, fortifying international citizenship.

In the analysis of the results of the Asian Regional Pilot Study, the problems to occur in the Main Survey and its technical adequacy have been examined. From its results, seven factors are newly extracted and are different from the original hypothesis and the composition of the question. However, it is proved that the ARM constructs framework is possibly applied to the Main Survey. In addition, with the results of the analysis of the Main Survey, it seems that the factor analysis and the causality analysis for each participant country should be done thoroughly. In hence, it is necessary that the characteristics of each participant should be examined respectively.

## 3. Contribution to Knowledge

After all the analysis of the results of ICCS 2009 for the policies and the strategies of civic and citizenship education for the next step can be suggested in the following; firstly, the results of ICCS 2009 suggests that

- which level of the citizenship be place in the Korean students, compared to the others,
- in which aspects of competency the Korean student have the strength and weakness,

- which kinds of backgrounds of the students make the citizenship increased,
- what the effect of the civic and citizenship education in the schools can be and which subjects are related to that effect,
- especially, which knowledge of the civic and citizenship education can affect the civic participation and practice.

Secondly, it shows that the results of the Main Survey and the analysis results of the case studies should be articulately compared. That is, the results of the Main Survey, the analysis of the case studies and the analysis of the National Context Survey should be analyzed synthetically and should help to construct the policies of the civic and citizenship education.

Finally, it is expected that the recent data of ICCS 2009 could be analyzed comparatively to the CIVED, the first phase of the research and could be the valuable data as the data of the civic and citizenship education for the third phase of the research in the year of 2019 and for more than 10 years. In consequence, the interests and supports by the government and the academic world should be necessarily required for developing the practical studies of the civic and citizenship education for the next step.

#### 4. Conclusion

This report is the outcome of the two-year research on strategy model development of Korean civic education. Therefore, we cannot anticipate the consequences of the level or the strategy of Korean civic education. However, to prepare for the analysis of the next year, we may consider the main themes of ICCS 2009 analysis as follows.

- First of all, we may consider the following themes importantly in contexts of international comparison: the differences of students' civic and citizenship capability (시민역량) across countries,
- the changes made in terms of the level of students' civic and citizenship capability and engagement after 1999, especially in knowledge and engagement,
- students' cognition and response on current crisis of civil society,
- aspects of school and education system related to students' civic value beliefs and attitudes,
- educational methods to achieve high thinking ability (for example, the opportunity of problem solving, participation in operational process, and

so on) related to the enhancement of the sense of citizenship, and

- aspects of gender, socio-economic, cultural background, students' individual characteristics related to students' attitude and achievement on civic education.

Secondly, we need to analyze the following items further more from Korean's perspectives:

- The level of Korean students' sense on the citizenship in comparison with other countries,
- the strengths and weaknesses of Korean students' capability,
- the comparison of student groups in different backgrounds and find who has higher citizenship capability,
- the effect of school civic education and the most effective themes/subjects, and
- the evaluation on the (education?) knowledge that has influenced/motivated to practice and empower civic participation.

Thirdly, while considering these consequences of analysis, we need to explore the cultural meaning in relation to Korean society. Until now, most of previous researcher tend to measure and interpret civic education from European or American point of view. In this context, ICCS 2009 research introduced the regional module to embrace perspectives from both western and Asian countries. Therefore, in the process of analyzing the next ICCS research, we need to compare different cases from both western and Asian regions and connect these two intimately.

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# Business Communication in the Virtual World

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## Abstract

*Today's students use technology to communicate more than any previous generation. Therefore, it seems natural to analyze whether this millennial or "Net Generation" can successfully transfer its social networking skills into a professional business setting. This two-phase study addresses that question by requiring students to complete assignments in a virtual setting. During the pilot study, students who participated in a traditional group project then evaluated their work using video conferencing. In the follow-up study, students will complete two virtual assignments: a group problem-solving exercise and a job interview. Virtual group members will not be allowed to meet face-to-face but will communicate using Blackboard technology, email, chat rooms, discussion boards and telephone. Relying only on technology to connect them, group members will brainstorm solutions to a case study. For the second virtual assignment, students will be interviewed via video conferencing, for a currently-advertised job in their career field.*

## 1. Introduction

In today's global environment, business meetings no longer are limited by physical boundaries. Instead, companies increasingly are requiring employees to conduct interviews, projects and meetings without ever being in the same room or the same country. To be adequately prepared to effectively participate in this virtual arena, it is imperative that college students learn how to function effectively in this setting – both in teams and as individuals. Today's college graduates may be sitting alone in a conference room, being interviewed for a job thousands of miles away. Or they may be tomorrow's employee who attends a virtual meeting with colleagues they have never met, each of them in separate offices at different geographic locations.

To achieve this goal of preparing today's students for 21st century communication technology; various portions of a Professional Business Communication course at the University of Toledo are being transformed from the traditional classroom into a virtual setting. This course, designed by Dr. Jacqueline Layng, is required of all business majors at the university. The course develops students' ability to apply theoretical perspectives in a practical

setting through formal presentations, modeling of interviewing techniques, resume writing and management of and participation in organizational structures.

The Department of Communication offers five sections of its Professional Business Communication course each semester. Each course is capped at 25 students. In addition to being a requirement for College of Business majors, it is a key course for the department's Public Relations and Interpersonal/Organizational areas of study. Historically, students have been required to participate in a group presentation with their classmates. Another assignment has included the completion of a resume and cover letter, which then were used by the instructor to interview the student for a potential job. All of these assignments have been moved from the classroom into a virtual setting.

## 2. Research Rationale

A pilot study was conducted transforming the two assignments in the five sections of the course and feedback from the students and instructors was collected. The second study is currently underway and the instructors for all five sections have been trained to guide the current students in two new virtual assignments. These assignments are designed to give the students more experience working as a group in a virtual environment and interviewing virtually. The assignments evolved as a result of the feedback from the pilot study.

### 2.1. Pilot Study

The pilot study was conducted in fall of 2009, students were asked to complete a virtual assignment summarizing their experience working in an assigned group. Instructors in each of five sections of the course selected the small groups, combining students studying different business areas including: accounting, human resources, sales and marketing. Students within the same class first met face-to-face in small groups to develop a 20-minute persuasive presentation. The presentation was required to use one of four types of persuasive argument: goodwill, proposal, sales or motivational. Prior to the groups' formation, students had observed their peers

presentations so they were familiar with both the public speaking quality and personalities of their group members.

Upon the completion of the groups' persuasive presentation, team members completed a written evaluation of each member's role within the group. Students assessed their peers on: contributions, reliability, task, participation and overall performance. The results of these evaluations were used as a factor in calculating the final persuasive presentation grades for students.

Subsequently, students were asked to prepare a five-minute virtual presentation, evaluating their group experience. Students delivered these presentations using video conferencing, which allowed the presenter in one room to converse with an audience in a remote setting. Using standing benchmarks of group formation, students were asked to discuss how the group formed, identify the different roles each member assumed, and explain how the group functioned and communicated and whether the project was a success.

The majority of students expressed satisfaction with their groups; many saying it was the best group experience of their college career. This may be attributed to two factors: 1) the nature of the persuasive presentation, which was a new experience for many of these business students; and 2) the fact that groups were selected by the instructor rather than by students. However, students repeatedly expressed difficulty in trying to find a meeting time that was feasible for all members. This common complaint emerged as the single greatest detractor to the groups' progress. When asked whether a virtual meeting format would have helped facilitate the process, students in previous Business Communication classes expressed a high interest in the convenience of such a setting. Students said it would greatly eliminate their difficulties in finding compatible meeting times. They also expressed interest in becoming comfortable with this technology prior to graduation.

Dr. Layng also piloted the virtual presentation in some of her earlier classes and students indicated that they were not prepared and had little knowledge of using this type of technology in the workplace. All of the comments Dr. Layng have received point to continued use of this technology and more hands-on experience for students. It was this feedback that laid the groundwork for the design of the follow-up study.

## **2.2. Follow-up Study**

The second phase of this study is taking place during the spring semester of 2010. Turning to the curriculum from the aforementioned Business Communication class once again, this phase will further transform the course into a virtual setting.

The group project will be moved into a virtual setting along with a job interview, which to date had been conducted in the classroom. In order to establish virtual groups whose members are not in the same class, Dr. Jacqueline Layng, the study designer, and Ms. Dee Drummond, her assistant, formed groups that consist of members from across the five course sections. For example, 125 business students will be assigned to five virtual groups: each group consisting of 25 students from different classes. The groups' assignment will be to analyze a case study that requires resolving a situation with a problematic manager. Each group will be led by one of five course instructors. To ensure consistency in teaching and learning across sections of this course, all five instructors have participated in team training sessions. Additionally, team members will generate training modules to be made available through a specially-designed web site for future course instructors. An instructional designer assisted in the creation of this web site and training modules. Members are not allowed to meet face-to-face, but hold their meetings virtually, using Blackboard communication tools. Additional accepted forms of group communication will include chat rooms, email and telephones. In their respective classes, students have been trained on Blackboard prior to their first virtual group meeting. As an initial bonding exercise to aid the Norming Stage of the group, members will be given a scenario that forces them to come up with a solution to being stranded in the desert. Following that ungraded but critical exercise, each group will receive a case study that requires the resolution of an issue surrounding a problematic manager. Students will have two months to complete this virtual project. Several lectures, reading assignments and a Blackboard training session have been provided to help students utilize "best practices" for working in virtual groups, which include using the Nominal Group Technique. It also will be explained that virtual communication "takes four times longer to exchange the same number of messages as communicating face-to-face" [1]. Students are being guided to use all possible channels of media and to establish protocols for the team on response times and message acknowledgement.

It is understood that in an effort to reduce costs, many companies now conduct job interviews with prospective employees from remote sites. To prepare students for this scenario, the study's second assignment will require them to be interviewed for a current job opening via video conferencing. After completing a resume and directed cover letter, students answer questions in a simulated job interview via iChat. Students also will have the ability to upload their resume and cover letter so the information is visible to the viewing audience. Each student is seated in front of a computer with a webcam, answering questions from audience

members in another location. The two parties are able to see each other on screen and hear each other, allowing them to converse as though in person. This medium will allow the richness of information conveyed in face-to-face communication, without the additional costs or logistical problems. The interview will be recorded so that it may be replayed for students to evaluate their performance as well as for external study by instructors.

### **3. Assessment**

Upon the project's completion, students will evaluate their group experience, using the same matrix as described in the pilot study. Further internal evaluation will be based on a survey and personal interviews with students, assessing their reaction and experience with these virtual assignments. Based on feedback from the previous pilot study, it is expected that students will respond favorably to these virtual assignments. Because this millennial generation is well-versed in technology, the study designers anticipate that students will be more engaged in this format than in the same assignments conducted in a traditional classroom setting.

As a final assessment of the value of the virtual classroom, the study designers will compare final course scores across three semesters. This comparison will examine the final outcomes: 1) Prior to any virtual assignment in the course; 2) fall 2009 with one short virtual assignment; and 3) spring 2010 with a major portion of the course transformed into a virtual setting. It is anticipated that students in the latter semester (those completing the greatest number of virtual assignments) will collectively have the highest final grades [2]. This assumption is based on previous research by Don Tapscott that has revealed, among other things, that the millennial student prefers: participatory rather than passive learning; customized learning; and high levels of interactivity and connection to others.

### **4. Conclusion**

Once the spring semester is completed and all the student and instructor feedback is collected, Dr. Layng and Ms. Drummond will assess the success or failure of transforming these two assignments. The main reason for conducting these studies is to ensure that our students are learning vital virtual communication skills being used in today's business world. The curriculum plan for this course is to keep it cutting edge and continue to update the material and teaching methods. We understand how important it is to keep UT students competitive in the global economy and will continue to strive for their success through innovative research and teaching techniques.

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# The Series of the Research Project: The Native Song of “Dikir Hulu” for Moral, Ethics, Value and Harmonious Learning in 3 Southern Bordering Provinces of Thailand

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## Abstract

*The native song named Dikir Hulu is a good alternative that can be used as media to enhance moral, ethics, value and harmoniousness. It is an important local wisdom in the three southern bordering provinces of Thailand. This paper focuses on the origin, development and role of lyrics in Dikir Hulu song; morals, ethics, valuing and harmoniousness that impact learning and teaching in the Southern bordering provinces; and how teachers integrate the native song Dikir Hulu into the curriculum.*

## 1. Introduction

The three southern bordering provinces of Thailand have experienced terrorism and continuous unrest due to lack of morality, ethics, and good valuing. It is necessary to make corrections and protect the future of the children and youth. It is important to use media and acknowledge the Native song as Dikir Hulu, which is an important local wisdom in the southern bordering provinces of Thailand. The song has been integrated into teaching to in-cooperate moral ethics, value and harmoniousness.

## 2. Literature Review

The National Education Act of Thailand required the arrangement of education to emphasize on the development of physical, emotional and mental state of Thai people. The knowledge and morality together with ethics and culture enable to live with others happily [1]. There has been lack of morality which has led to many unaccounted crimes. The 3 southern bordering provinces in Thailand also encountered such problems. It is necessary for each part to come together in order to find a way of solving the problems. The Ministry of Education [2] suggested following steps in propagating morality and ethics:

- meaning: the importance and the usefulness of behaviour;
- analysis: decision making and acknowledgement of the indoctrination;
- behaviour improvement: morality and ethics.

Kowit Prawarnpreuk (referred to Boonchom Srisaart, [3]) has suggested the steps for the indoctrination of morality, ethics, social values and harmoniousness by teaching students how to separate of truth and false. The indoctrination of morality, ethics and social values consisted of respect towards the indoctrination by emphasizing the values, knowledge and promoting best practices.

Chiris Aryris (referred to chantrane Sanguannarm) has suggested that individual development must involve participation in:

- giving opinion,
- acceptance of goal,
- the creation of sense of responsibility.

Therefore the development, indoctrination of morality, and ethics must consist of every person involved in the process of learning, creating good and happy learning atmosphere and meaningful learning system.

## 3. Teaching by the utilization of native song named Dikir Hulu

The head office of National Committee for Primary Education has emphasized the importance of the song as follows: the song attracts both genders, from children to adult; the song helps to reduce tension, although some of us are not good at singing but we can be good listeners; the song can accelerate memories, especially for children; the song can assist in teaching (content, morality and ethics); and also it can enhance knowledge, understanding and use for emphasizing daily life.

The song and music preserves stable emotion with harmony with balance beauty which we must sense it with our ears, eyes, nose, tongue, physical imagination or our feeling though the process of various type of arts such as musical activities, song, dances, drawing, painting and field trip both within the country and outside the country, participation of culture work and social events between relatives friends and others, etc.

According to Khanitta Jitchinakul [4] cultural heritage reflects the lives of the local people, reflection of the belief and provision of entertainment to the society. For the society which is still under developed, local song is considered one of the main entertainments that creates pleasure and fun to the people both in their

leisure time and special occasion. The local song composed of the content full of fun. It unites the group of people song together. Serve as the instrument to control the society, although the content of the song must not violate the local custom such as flirting and elopement. The local song always focuses on regulation and the suitable behaviour towards society and tends to persuade people to follow the good things of the society. The following were the steps to be taken towards the usage of song in teaching:

- Reading the content of the song.
- The teacher sings for the first time.
- Train the student to sing by verse.
- Singing together.
- Participation in the summary of the song content.
- Discuss and summarize the good and bad that need to be taught.
- Allowed the student to express their feeling.
- Co-summary of the thing which can be put into practice.

The national office for primary education emphasized that utilization of the song helps increase learning, particularly with the analysis of the content of the song feeling and meaning of morality ethics for daily living.

#### **4. Analysis of findings**

The teaching morality and ethics by using Dikir Hulu shows that the learners are highly satisfy with the statistical significance level of .01. The system of teaching Dikir Hulu is on the 6 steps of teaching morality and ethics: relaxation by song; by experience (morality and ethics preparatory study step towards preference); learning by experience; presentation of work result; Interesting instruction media participation of the learners; co-relationship and exchange learning, open opportunity for the learners to express their opinion and their behaviour.

According to the National Office of the Committee for Primary Education song can increase better memory especially for children. In addition by using the song as a media of teaching it encourages participation and allows the students to remember the lesson better [5].

#### **5. Conclusions**

This research has contributed to the role of native Dikir Hulu song that has been used for teaching. The song is used as new model for teaching morality, ethics, conservation of culture and custom. Acknowledgement of the limitation of locality

#### **6. Future work**

The future works will focus on the development and integration of Dikir Hulu in the local curriculum and promoting the indoctrination of morality and ethics.

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# The Information, Motivation and Behavioural Skills (IMB) Model for the Reduction of HIV Risk Behaviour amongst Adolescent Learners in South Africa

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## Abstract

*This Paper discusses the application of an Information, Motivation and Behavioural Skills (IMB) Model in a school-based programme for the reduction of HIV risk behavior amongst 259 Grade 11 learners in two high schools in Alexandra township, Johannesburg. School 1 was an Experimental group, while School 2 was a Control group. After a baseline study at both schools, a 3-week intervention programme was conducted at School 1. A post test was conducted at both schools. The intervention was repeated at School 2, followed by another post test at both schools. A final test was conducted at both schools. While an IMB intervention generally increased the levels of HIV/AIDS information, motivation and behavioural skills among learners, the results were not statistically significant. More meaningful and sustainable behavioural changes may result if the IMB model is applied in the context of socio-cultural factors influencing the lives of adolescent learners.*

## 1. Introduction

In South Africa, an estimated 5.7 million people were living with HIV at the end of 2007 (UNAIDS, 2008). The same report predicts that this number will exceed 6 million by 2015, at a rate of about 1 500 new infections each day (Rehle et al, 2007). According to a UNAIDS report (2006), South Africa's AIDS epidemic is one of the worst in the world, and shows no evidence of a decline. According to Statistics South Africa (2009), over 250,000 South Africans died of AIDS in 2008. In South Africa, new infections among young people is what still fuels the HIV pandemic, and is driven by patterns of sexual behaviour skewed towards high risk (Daily News, 29 April, 2005). In fact, according to the United Nations Population Fund (UNFPA, 2003), HIV/AIDS has become a disease of young people. The rising rates of sexually transmitted infections (including HIV/AIDS) may signal a rise in unsafe sex, especially among adolescents (UNAIDS, 2002).

South African youth have much knowledge about HIV/AIDS [14], [16]. Such knowledge has not translated into safer sexual practices [7] and

HIV infections continue to rise [8]. Although township high school students in South Africa have a high level of knowledge about HIV/AIDS, they do not practice safe sex. Current pedagogical approaches in HIV/AIDS education must be radically altered [9].

Learners need information to make rational health choices, negotiate and make wise decisions. They also need to be motivated to act upon information as well as develop appropriate skills to perform healthy behaviours [1]. The need for strategies and interventions aimed at young people is becoming increasingly critical as young people are said to be particularly vulnerable to HIV infection due to their risky sexual behavior [9].

Adolescents will continue to be at risk for HIV/AIDS infection unless appropriate HIV/AIDS education and risk reduction programmes are implemented in our schools.

There is a need for an HIV/AIDS intervention that will not only disseminate information about HIV/AIDS to adolescent learners, but will also motivate adolescents to act upon the information and adopt behavioural skills that will sustain safe sexual practices and prevent HIV infection.

## 2. IMB Model

The Information, Motivation and Behavioural Skills Model [4] is based on a health behavior theory implicates cognitive determinants of HIV risk and prevention, such as AIDS knowledge, personal attitudes, and behavioural intentions to practice prevention. According to this model, AIDS prevention behavior is determined by information, or knowing about transmission and prevention, motivation to reduce risk, and behavioural skills to practice prevention.

The IMB model has yielded positive results in its implementation among high school learners in the USA [4], [5], and among men and women with sexually transmitted infections in South Africa.

This paper examines the effectiveness of the Information, Motivation and Behavioural Skills (IMB) model in promoting appropriate sexual behavior and practices that reduce the likelihood of HIV risk behavior amongst adolescent learners in township public high schools in South Africa.

### 3. Method

#### 3.1. Participants

Participants were black South African Grade 11 learners (aged from 14 to 18), from two high schools located in Alexandra township, Johannesburg. In total, 259 learners were recruited for this study, with 136 learners from School 1, serving as the Experimental group (coded ES) and 123 learners from School 2 as the Control group (coded CS). Both male and female learners were included in the study.

#### 3.2. Research Design

This study falls within the realm of a quasi-experimental and pre-test-post-test research design. In particular, a quasi-experimental form of the cross-lagged panel design was used. Table 1 shows the various steps taken at the four testing times.

#### 3.3. Procedures

Data were collected using a modified version of the “Teen Health Survey”, a 13-page questionnaire designed for the IMB model of HIV risk behavior change. This instrument was originally administered to 1,500 ninth-grade students in four high schools in the USA by Fisher et al.

After a baseline study (Time 1) at the two participating schools, an HIV/AIDS intervention programme was conducted at the Experimental school (ES). This 3-week-long intervention ran on the following themes: Week One: HIV/AIDS Information; Week Two: Motivation to act upon HIV/AIDS information; Week Three: Behavioural Skills. A post-test (Time 2) was then conducted both schools. The intervention was repeated at the Control school (CS), followed by another post-test (Time 3) at both schools. A final post-test (Time 4) was conducted.

### 4. Survey

#### 4.1. HIV/AIDS Information

The “Teen Health Survey” instrument was used to assess the learners’ levels of AIDS prevention information. Specifically, learners were tested on facts about HIV and AIDS that are relevant to the practice of preventive behavior. Learners were expected to respond to a 23-item questionnaire on Facts about HIV and AIDS on a 5-point scale as follows: Definitely True; Probably True; Don’t Know; Probably False; Definitely False. The

questionnaire was on general facts on HIV and AIDS, including issues like, HIV transmission, signs and symptoms of HIV and AIDS.

#### 4.2. Motivation

Motivation to engage in AIDS preventive behavior was assessed in accordance with the theory of Reasoned Action.

The Subjective Norms Regarding HIV Preventive Acts scale measured a learner’s perceived norms (or social support) for engaging in HIV preventive behaviours on a five point scale ranging from “very true” to “very untrue”. Questionnaire items in this section established the *social motivation* in terms of general opinion and views of people around him/her regarding sexual behaviour. Such opinions could have a large influence on the adolescent’s behavioural intentions. For instance, the respondents were asked the opinion of friends regarding delaying sex, use of condoms, and so on.

The Behavioural Intentions to Engage in AIDS Preventive Acts scale measured the learner’s intention (or plans) to perform each of the preventive behaviours in the near future. This was accomplished by having learners rate, on a five point scale ranging from “very true” to “very untrue” the likelihood that they would perform each of the HIV preventive behaviours in the near future. Questions were on issues like, delaying sexual intercourse and using condoms.

The Perceived Vulnerability scale measured the learners’ perceptions of their own and their peers’ likelihood of being infected with HIV, and their personal fear associated with being infected with HIV. This was accomplished by learners rating their perceptions on a five point scale ranging from “no chance” to “very strong chance”, and “not at all afraid” to “very afraid”. Responses to questions like, “What do you think are your friends and your own chances of getting HIV/AIDS?” and “How afraid are you of getting HIV/AIDS?” would reveal the adolescents’ personal susceptibility to HIV infection and motivate him or her to adopt safe sexual behaviours.

#### 4.3. Behavioural Skills

The HIV Prevention Behavioural Skills scale, tapped into the perceived difficulty or ease with which one would engage in a range of AIDS preventive behaviours. The scale asked respondents to rate, on 5-point scales, how hard or easy it would be for them to perform the series of HIV-preventive behaviours, ranging from “very hard to do” to “very easy to do”. In other words, respondents were asked to show, among other things, how assertive they would be when confronted with HIV risk situations. For instance, they would reveal

how easy or difficult it was for them to be persuaded to do things they did not want to do, such as, having sex without a condom, and so on.

#### 4.5. Data analysis

All outcome variables were first inspected for distribution properties using histogram plots. Analysis of co-variance (ANCOVA), a statistical control technique used to statistically equate groups that differ on a pretest variable, was used to assess differences between the groups on the two post-test measures. In addition, repeated measures ANOVA assessed generally the effectiveness of the treatment and control for lag effects.

To test for the short-term, long-term and retention effects of the intervention model, three separate matched-sample *t*-tests or repeated measures ANOVA were conducted. The short-term effectiveness of the intervention model was determined by comparing the results of the first and second trial, while a comparison of the first and last trial, and second and last, would reveal the long-term and retentions effects, respectively. All data was analysed using the SAS System.

## 5. Results

### 5.1. Hypothesis

The researcher hypothesized that levels of HIV/AIDS information, motivation and behavioural skills among the learner participants was likely to increase as a result of the intervention based on the IMB model. According to the hypothesis, the mean score at ES school was expected to rise at Time 2, as a result of an intervention between Times 1 and 2. However, the score at CS school was to remain unchanged at Time 2, until an intervention at that school between Times 2 and 3. Ultimately, the results were expected to be maintained at a high level in both schools at Time 4.

The Table 2 shows the mean scores of the variables on which the participating learners at the two schools were tested at the four Times. The times were separate from each other by about one month.

Table 1. Research Design: Time 1, Time 2, Time 3, Time 4

		(Time 1)		(Time 2)		(Time 3)	(Time 4)
<b>SCHOOL 1 (ES)</b>	Learner sampling	Pretest/ Baseline assessment	INTER- VENTION (1)	Posttest repeated measure	-----	Posttest repeated measure	Posttest repeated measure
<b>SCHOOL 2 (CS)</b>	Learner sampling	Pretest/ Baseline assessment	-----	Posttest repeated measure	INTER- VENTION (2)	Posttest repeated measure	Posttest repeated measure

Table 2. Mean scores for HIV/AIDS information, Motivation, and Behavioural Skills

	SCHOOL 1 (ES)				SCHOOL 2 (CS)			
VARIABLE	Time 1	Time 2	Time 3	Time 4	Time 1	Time 2	Time 3	Time 4
<b>HIV/AIDS Information</b>	<b>0.501</b> <i>t</i> = 44; <i>p</i> = <.0001	<b>0.624</b> <i>t</i> = 55.3; <i>p</i> = <.0001	<b>0.705</b> <i>t</i> = 63; <i>p</i> = <.0001	<b>0.739</b> <i>t</i> = 65.6; <i>p</i> = <.0001	<b>0.523</b> <i>t</i> = 47.8; <i>p</i> = <.0001	<b>0.634</b> <i>t</i> = 58.95; <i>p</i> = <.0001	<b>0.735</b> <i>t</i> = 68.7; <i>p</i> = <.0001	<b>0.775</b> <i>t</i> = 72.3; <i>p</i> = <.0001
<b>Motivation: Subjective Norms</b>	<b>3.052</b> <i>t</i> = 20.54; <i>p</i> = <.0001	<b>3.793</b> <i>t</i> = 25.42; <i>p</i> = <.0001	<b>3.691</b> <i>t</i> = 25.04; <i>p</i> = <.0001	<b>3.636</b> <i>t</i> = 24.67; <i>p</i> = <.0001	<b>3.747</b> <i>t</i> = 26.75; <i>p</i> = <.0001	<b>3.793</b> <i>t</i> = 27.08; <i>p</i> = <.0001	<b>3.917</b> <i>t</i> = 27.97; <i>p</i> = <.0001	<b>3.519</b> <i>t</i> = 25.04; <i>p</i> = <.0001
<b>Motivation: Behavioural Intentions</b>	<b>4.661</b> <i>t</i> = 52.59; <i>p</i> = <.0001	<b>4.669</b> <i>t</i> = 52.68; <i>p</i> = <.0001	<b>4.678</b> <i>t</i> = 52.78; <i>p</i> = <.0001	<b>4.828</b> <i>t</i> = 54.7; <i>p</i> = <.0001	<b>4.5</b> <i>t</i> = 55.43; <i>p</i> = <.0001	<b>4.385</b> <i>t</i> = 52.26; <i>p</i> = <.0001	<b>4.594</b> <i>t</i> = 54.34; <i>p</i> = <.0001	<b>4.709</b> <i>t</i> = 55.91; <i>p</i> = <.0001
<b>Motivation: Vulnerability</b>	<b>3.789</b> <i>t</i> = 26.45; <i>p</i> = <.0001	<b>3.974</b> <i>t</i> = 27.51; <i>p</i> = <.0001	<b>4.041</b> <i>t</i> = 28.32; <i>p</i> = <.0001	<b>3.885</b> <i>t</i> = 27.11; <i>p</i> = <.0001	<b>3.838</b> <i>t</i> = 28.29; <i>p</i> = <.0001	<b>4.019</b> <i>t</i> = 29.52; <i>p</i> = <.0001	<b>3.902</b> <i>t</i> = 28.45; <i>p</i> = <.0001	<b>4.061</b> <i>t</i> = 29.83; <i>p</i> = <.0001
<b>Behavioural Skills</b>	<b>4.264</b> ( <i>t</i> = 40.18; <i>p</i> = <.0001)	<b>4.304</b> <i>t</i> = 40.56; <i>p</i> = <.0001	<b>4.434</b> <i>t</i> = 41.78; <i>p</i> = <.0001	<b>4.569</b> <i>t</i> = 42.88; <i>p</i> = <.0001	<b>4.227</b> <i>t</i> = 41.77; <i>p</i> = <.0001	<b>4.096</b> <i>t</i> = 40.77; <i>p</i> = <.0001	<b>4.221</b> <i>t</i> = 42.16; <i>p</i> = <.0001	<b>4.569</b> <i>t</i> = 45.15; <i>p</i> = <.0001

## 5.2. HIV/AIDS Information

Table 2 shows that, the information levels at the two schools were almost the same at baseline level (*mean* = 0.501; *t* = 44; *p* = <.0001, for ES, and *mean* = 0.523; *t* = 47.8; *p* = <.0001; for CS). After the intervention between Times 1 and 2 at ES, the mean score at that school rose to *mean* = 0.62; *t* = 55.3; *p* = <.0001 at Time 2. Similarly, the intervention at CS between Times 2 and 3 raised the mean score at that school from *mean* = 0.634; *t* = 58.95; *p* = <.0001 to *mean* = 0.735; *t* = 68.7; *p* = <.0001 at Time 3. At all levels of comparison, all the means were found to be statistically significant at the highest level of <.0001. This proves the intervention was effective in increasing the learners' levels of knowledge about HIV and AIDS.

## 5.3. Motivation

The Table 2 shows the mean scores of the two items which measured the *social support* of the learners at the two schools at different testing times. For instance, for Subjective Norm 1 (where

learners stated if their friends thought they should delay sex until when older or not), the mean scores at both schools at Time 1 were *mean* = 3.44; *t* = 24.5; *p* = <.0001, for ES, and *mean* = 3.76; *t* = 28.4; *p* = <.0001, for CS. For Subjective Norm 2 (where learners' boy/girlfriends thought sex should be delayed or not till when one was older), the *mean* score at ES was *mean* = 3.052; *t* = 20.54; *p* = <.0001, and that of CS was *mean* = 3.747; *t* = 26.75; *p* = <.0001. After the intervention at ES between Times 1 and 2, Subjective Norm 1 and 2 scores at that school rose at Time 2 to *mean* = 4.1; *t* = 29.2; *p* = <.0001, and *mean* = 3.793; *t* = 27.08; *p* = <.0001, respectively. Similarly, after the intervention at CS between Times 2 and 3, the mean score on Subjective Norms 1 and 2 increased at Time 3 to *mean* = 3.9; *t* = 29.4; *p* = <.0001, and *mean* = 3.917; *t* = 27.97; *p* = <.0001, respectively.

According to Table 2, mean scores of the learners' behavioural intentions also increased from baseline level. For instance, for Behavioural Intentions 2 (where learners indicated if they planned to talk to their partners about whether or not they should have sex), the mean scores at Time 1 were *mean* = 3.685; *t* = 25.22; *p* = <.0001 at ES,

and  $mean = 3.42$ ;  $t = 24.63$ ;  $p = <.0001$  at CS. After the intervention at ES between Times 1 and 2, the mean score at that school rose to  $mean = 3.57$ ;  $t = 25.71$ ;  $p = <.0001$ . An increase was also noticed after the intervention at CS between Times 2 and 3, when the mean score at that school moved to  $mean = 3.713$ ;  $t = 26.45$ ;  $p = <.0001$ . A similar trend was observed for Behavioural Intentions 2 and 5 (where learners stated if they planned to carry condoms with them or use them during sex). The mean scores increased after the interventions at between Times 1 and 2 at ES, and between Times 2 and 3 at CS.

In terms of the learners' vulnerability to HIV infection, the results show that the intervention increased the mean scores of Vulnerability 1 (where learners indicated the chances of their friends getting infected with HIV), and Vulnerability 3 (where learners expressed their amount of fear of HIV/AIDS). For instance, beginning with a baseline score of  $mean = 2.241$ ;  $t = 17.89$ ;  $p = <.0001$ , ES showed a higher mean score of  $mean = 2.438$ ;  $t = 19.38$ ;  $p = <.0001$  at Time 2, after the intervention between Time 1 and Time 2. A similar rise was also seen at CS at Time 3 after the intervention between Times 2 and 3. For Vulnerability 3 (where learners stated their level of fear of HIV and AIDS), similar increased were noticed after each intervention at both schools.

The results above show that the means at all levels of comparison were statistically significant ( $<.0001$ ). An intervention based on the IMB model was, therefore, effective in increasing the learners' motivation.

#### 5.4. Behavioural Skills

The Table 2 also shows the mean scores of behavioural skills at the two schools at the four testing times. For Skill 3 (where learners reported the accessibility of condoms to them), and Skills 4 and 5 (where learners said how easy/difficult it was for them to carry condoms around or use them during sexual intercourse), a steady increase was noticeable after the intervention at ES between Times 1 and 2, and at CS between Times 2 and 3. For instance, for Skill 3 the mean score Time 2 rose from  $mean = 3.561$ ;  $t = 25.57$ ;  $p = <.0001$  to  $mean = 3.715$ ;  $t = 26.68$ ;  $p = <.0001$  at ES at Time 2, while that at CS increased from  $mean = 3.837$ ;  $t = 28.87$ ;  $p = <.0001$  to  $mean = 3.882$ ;  $t = 29.31$ ;  $p = <.0001$ .

As in the information and motivation variables, the above results show that an intervention based on the IMB is effective in increasing the ability of learners to engage in AIDS preventive measures.

## 6. Discussion

The researcher is aware of limitations in this study. Firstly, some anomalies in the mean scores of the variables used in this study have been identified. For example, it is difficult to explain why the mean score for the *Behavioural Intentions* item of the questionnaire for School 2 was higher at Time 1 ( $mean = 4.5$ ;  $t = 55.43$ ;  $p = <.0001$ ), than Time 2 ( $mean = 4.385$ ;  $t = 52.26$ ;  $p = <.0001$ ) at the same school. Also, the fact that the score on the *Behavioural Skills 5* item at School 2 at Time 1 was higher at ( $mean = 4.227$ ;  $t = 41.77$ ;  $p = <.0001$ ) than the score at Time 3 ( $mean = 4.221$ ;  $t = 42.16$ ;  $p = <.0001$ ), where an intervention had been conducted between Times 2 and 3, is puzzling.

Such discrepancies may suggest the existence of some extraneous variables prior to the IMB intervention. These variables may have influenced the results of this study. For instance, the researcher is aware that learners may have been, to some extent, exposed to HIV/AIDS information through the media (outdoor, broadcast, printed, internet, and so on), Life Orientation lessons at school, religious and moral instruction in churches, sexuality education at home, and through other initiatives by various non-Governmental organizations (NGOs) as well as the state. In this study, loveLife, a national initiative promoting a healthy, AIDS-free lifestyle among South African adolescents appears to have been the most influential factor.

After analyzing data on the main study, the researcher realized the possible impact of loveLife in Alexandra township high schools; the researcher conducted a brief survey of this organization in terms of HIV/AIDS education. The results showed that the loveLife initiative had significantly raised levels of information among adolescent learners.

LoveLife programmes had also motivated and inspired adolescents to take control of their lives, set goals and make healthy choices (Pettifor, 2007). The organization, among other things, advocated delayed initiation of sexual activity, reduction in number of sex partners among already sexually active youth, and consistent condom use.

An IMB intervention would, therefore, appear to be a repetition of the activities of the loveLife initiative.

The mean scores in this study also suggest that an IMB model may not introduce long-term behavioural changes among learners. This is evidenced by the *Subjective Norms* item at both Schools 1 and 2. While an intervention between Times 1 and 2 at School 1 raised the mean score to ( $mean = 3.793$ ;  $t = 25.42$ ;  $p = <.0001$ ) at Time 2, this score dropped to ( $mean = 3.691$ ;  $t = 25.04$ ;  $p = <.0001$ ) at Time 3. This score dropped further at Time 4. A similar trend was noticed at School 2, where scores kept dropping after an intervention.

This inability of the IMB model to sustain behavioural changes may be a limitation against the model.

Perhaps the effectiveness of the IMB model may be better realised when the learners' socio-cultural factors are also considered. HIV/AIDS education may not be just about giving information, motivating learners and teaching them behavioural skills. The way HIV/AIDS information is received, perceived and applied depends, in some way, on the learners' socio-economic background, gender, cultural beliefs and practices, religious background, social environment at home and the community, political environment, and so on.

With these and other socio-cultural factors in mind, questions around information, motivation and behavioural skills become much more profound. For instance, what information must be given to learners? What is the source of such information? How is that information supposed to be given? We may ask similar questions about motivation and behavioural skills.

Nevertheless, results in this study show that, at all levels of comparison, all the means were found to be at the highest level of significance ( $<.0001$ ). This confirmed the researcher's hypothesis that an intervention based on the IMB model has the likelihood of raising the levels of HIV/AIDS information, motivation and behavioural skills among learners. In other words, given the statistical findings, the intervention proved successful and may be an invaluable model for HIV/AIDS education.

## 7. Conclusion

This paper presents two sides of the IMB model. Firstly, the IMB model is, to some extent, effective in reducing HIV risk behavior among adolescent learners. Accordingly, the model is a welcome departure from the traditional approaches in HIV/AIDS education where HIV/AIDS information has been the focal point in pedagogy, void of motivating learners to act upon such information, as well as equipping them with behavioural skills that may influence changes in their sexual behaviours and practices. However, the paper also argues that, in order to reduce HIV risk behaviour among adolescents, the IMB model needs to incorporate the socio-cultural aspects of learners.

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## **Session 26: Curriculum, Research and Development**

The Inclusion of Key Nature of Science Concepts in Current Saudi Middle School Science Textbooks  
(Saeed M Alshamrani)

Examining Minority Pre-Service Teachers Preconceptions of Learning to Teach Science: A Border  
Crossing Perspective  
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Research Funding System for Universities in Japan: A Case Study of National University Corporation  
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Does Public Education Prepare Students with 21st Century Skills? Perspectives of Elementary School  
Teachers on the Curriculum and Administrative Support  
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# The Inclusion of Key Nature of Science Concepts in Current Saudi Middle School Science Textbooks

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## Abstract

*The purpose of this study was to investigate the NOS (Nature of Science) inclusion in Saudi middle school science textbooks. To be specific, this study examines the included NOS aspects, the frequency of NOS inclusion; the contexts exist for NOS inclusion, and the accuracy of NOS inclusion. This study utilizes the Master Aspects of Nature of Science [MA-NOS], which includes 12 NOS aspects that ought to be included in K-12 science curriculum. To facilitate the content analysis of the selected textbooks, the study utilized a modified version of The Collection Data Coding Guide developed by Alshamrani; and includes six parts describing the aspects of NOS and the process of identifying and collecting data. The findings of this study indicated low inclusions of NOS aspects in the textbooks; it also revealed that not all NOS aspects are included.*

## 1. Introduction

The textbooks play a primary role in both what is taught and how it is taught and account for at least 75% of students' academic exposure to the content of course [2]. To improve students' understanding of NOS through science textbooks, two issues must be addressed in the treatment of NOS in science textbooks. The first issue is to determine what aspects of NOS should be presented in texts. Science education standard documents and science education studies have contributed to the recommendations of what issues of NOS ought to be included in K-12 science curriculum. The second issue addressed regards the treatment of NOS in science textbooks relates to how these textbooks reflect the recommendations of science education standard documents and science education studies. Although science education standard documents and science education studies reveal a degree of consensus on what aspects of NOS should be taught in K-12 science curriculum, not enough analysis has been accomplished with respect to the ways in which science textbooks reflect this consensus. More light should be shed on the aspects of NOS

presented in science textbooks and how accurate they are.

## 2. Purpose of the Study

This study investigated how current Saudi middle school science textbooks address the MA-NOS. My focus was on which of these NOS aspects are included, how much they are included, what contexts exist for their inclusions, how accurately they are included, and how they are included through the textbooks for the aimed grade levels (the seventh, eighth, and ninth grades).

This study aimed to achieve the following objects:

- Identifying what NOS aspects are included in current Saudi middle school science textbooks.
- Identifying how frequently NOS aspects are included in current Saudi middle school science textbooks.
- Identifying what contexts exist for the inclusion of NOS in current Saudi middle school science textbooks.
- Identifying how accurately NOS aspects are presented in current Saudi middle school science textbooks.
- Identifying how NOS aspects are included through the grade levels in current Saudi and middle school science textbooks.

## 3. Methodology

The content analysis was used to answer the first three research questions of this study. However, the fourth research question was answered through a comparison between the meaning of the included NOS element and the developed description of its related NOS aspect in the coding guide. To answer the fifth question of this study, a comparison between the findings was followed to identify how NOS aspects are included through the grade levels.

This study utilized the data collection coding guide developed by Alshamrani [1]; this coding

guide was designed to analyze science textbooks to identify: (a) the included NOS, (b) the frequency of NOS inclusion, (c) the contexts exist for NOS inclusion, and (d) the accuracy of NOS inclusion. The researcher translated and modified this coding guide to be used appropriately for Arabic science textbooks.

#### **4. Significance of the study**

The findings of this study will help in understanding of NOS inclusion in science textbooks; discrepancies of this inclusion in texts, as revealed by this study, can be of use to future authors of science textbooks, helping to insure the inclusion of the topics and themes relate to NOS; science teachers can develop a better understanding of what NOS means, as it serves -- through its variety of components -- as a cohesive element in science textbooks; educators can develop a better understanding of the criteria that might be used in selecting science textbooks. All of the above said benefits can aid students' understanding of a very important aspect of science.

#### **5. Conclusion and Future Works**

The study found that there is a gap between science education research recommendations on the NOS aspects that should be included in K-12 science curriculum and their inclusion in Saudi middle school science textbooks. In addition, the selected textbooks present an unbalanced inclusion of NOS aspects.

This study recommended that there should be more efforts to develop implementations for the NOS inclusion in science textbooks. Two types of implementations should be derived to promote NOS inclusion: first, general implementations recommending bases for NOS inclusion. This type of implementations develops general rules and suggestions facilitating the incorporation of NOS with any science lesson. Second, specific implications providing some specific ideas regarding NOS inclusion in a specific science topic such as electric field or atomic theory.

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# Examining Minority Pre-Service Teachers Preconceptions of Learning to Teach Science: A Border Crossing Perspective

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## Abstract

*The purpose of this study was to explore the nature of the negotiations that minority pre-service teachers engage in to mediate the complexity of learning to teach science. Data consisted of participants' drawings of science instruction; narratives derived from these drawings; and, self-review essays of participants' microteaching sessions. Findings showed that participants considered the physical makeup of the science classroom as an appropriate pedagogical tool for science instruction, and failed to see their own linguistic and cultural resources as key informants in learning to teach science. Participants' past experiences and beliefs influenced both findings.*

## 1. Introduction

This study was designed to explore the nature of the negotiations that minority pre-service teachers engage in to mediate the complexity of learning to teach science. There is a need to build a knowledge base for understanding the unique personal mechanisms that minority pre-service teachers use to mediate the complexity of learning to teach science so that teacher preparation programs can use this knowledge to recruit, retain, educate, and credential young minority pre-service teacher candidates who will go out and be successful science teachers [1], [2].

## 2. Review of Literature

A growing body of literature has continuously stressed the importance of increasing the numbers of minority teachers in schools and teacher education programs [3], [4], [5], [6], [7], [8], [9], [10], [11], [12]. Researchers seem to reach the consensus that the overarching reason for this importance has been an increasingly diverse body of students in the nation's schools. They argue that minority students suffer lack of role models-- a role model deficit paradigm—[11], and thus, minority teachers will act as role model designates and mentors, who will be empathetic towards minority students' needs in the classroom [3], [5], [6], [7], [8], [9], [11], [12], [13].

This substantiation falters on three levels: First, some minority teachers may have internalized negative images of their own ethnic groups and thus, they may be just as ineffective as any culturally insensitive white teacher. Second, no students should be educated exclusively by members of their own ethnic group, as this denies and deprives students from a realistic understanding of growing up in a multicultural society [9]. Third, although minority pre-service teachers have more diverse experiences than white pre-service teachers, all pre-service teachers, minority or white, have to comprehend and construct pedagogical skills to teach all students [14].

Another camp of thought claims that the need for more minority teachers in schools should be based on the perspective of acknowledging minority teachers as cultural mediators in classrooms. That is, teachers who use their "personal mechanisms" [1], arising from their own cultural and linguistic resources, past experiences, and beliefs, as appropriate pedagogical tools to enact a socially just agenda for their students [13]. These personal mechanisms are used by teachers to acknowledge their students' needs and backgrounds, and thus bring about meaningful teacher and student interactions and increase all students' motivation for classroom engagement and learning [15], [16]. Thus, these personal mechanisms might be the very skills that minority teachers use to "... recognize the diversity of their classes and organize the classrooms so that students have the opportunity to participate fully" [17].

Thus, teacher education programs must create supportive environments for minority pre-service teachers to transform their personal mechanisms into appropriate pedagogical tools, which is much needed in diverse classrooms [6], [7], [8], [9], [11]. More specifically, teacher educators should foster pre-service teachers' reflection on and understanding of teachers' and students' ethnic/gender/racial/identities, and complex and dynamic relationships between teachers and students from diverse backgrounds [20]. Although both role model deficit and cultural mediator perspectives provide persuasive rationale for recruiting minority teachers, contemporary research is more concerned with the role model deficit paradigm [1] than with minority

pre-service teachers' personal mechanisms. There is a lack of studies that have investigated the role of elementary pre-service teachers' personal mechanisms in their evolving learning to teach science philosophies.

The purpose of this paper is to address the gap that exists in the knowledge base for understanding how minority pre-service teachers' personal mechanisms are negotiated within the context of mediating the complexity of learning to teach science. This study is part of a larger qualitative study that investigated both white and minority pre-service science teachers' conceptions of learning to teach science. The findings presented in this paper are the unique personal mechanisms that minority pre-service teachers in this study used to mediate the complexity of learning to teach science. A border crossing theoretical framework framed the study [19], [20], [21], [22].

### 3. Significance

The significance of building the knowledge base for the investigation of the role of elementary preservice teachers' personal mechanisms in their evolving teaching philosophies is crucial for number of reasons: First, there is a need for teacher education programs to build an infrastructure necessary for recognizing and supporting preservice teachers' personal mechanisms that play a crucial role in fostering and respecting diversity represented in K-12 classrooms [11].

Second, teacher educators can use knowledge gained from studying elementary preservice teachers' personal mechanisms to provide reflective platforms that preservice teachers can utilize to hear and see themselves as educators [7]. Finally, minority preservice teachers need to develop culturally relevant pedagogies [1], [2] that are relevant to today's increasingly diverse classrooms. The need for culturally responsive pedagogies is pertinent as science teachers are seen as "pedagogical culture workers who make the culture of science accessible to all students" [22].

### 4. Theoretical Framework

Perspectives from the border-crossing literature guided this study. According to this framework, access to meaningful and effective education is possible for students only when teachers promote and integrate cultures of science with their students' cultural and linguistic backgrounds. To accomplish this meaningful integration - border crossing - teachers take on the roles of "proficient tour guides" [2] who are knowledgeable of both the cultures of science and their students own cultural and linguistic backgrounds and thus, easily move across a non-existent border to bring about instructional

congruence between their teaching and their students' cultural backgrounds.

Aikenhead and Jegede [22] describe how a microculture can be conceptualized as norms, values, beliefs, expectations and conventional actions prevalent among the members of a group within a larger culture. In addition, they describe four types of border crossings between microcultures: smooth, managed, hazardous, and impossible. When border crossings are smooth, movement between microcultures is possible because the cultural border is considered invisible or nonexistent. The familiarity with both microcultures, such as the language, cultural norms, kinship, shared history, and the ability to adapt and cogitate differently in both microcultures allows one for easy, flexible and successful border crossings. Managed border crossings occur when there is discomfort with the microculture one is crossing into. This uneasiness occurs due to the cultural differences experienced or the discomfort experienced when one encounters unfamiliar social behaviors. Hazardous border crossings happen when one's self-esteem or ego is threatened. To cope with this crossing, one relies on strategies, such as humor, conformity, power, and politics, to move across. Border crossings become impossible when the move to the other microculture is perceived as involving a possible psychological threat.

Correspondingly, science teachers' border crossings requires teachers to recognize, acknowledge, and respect the linguistic and cultural resources that students carry with them into the classroom the critical interactions between Western science, school science, and the cultural backgrounds of students [2], and the associated repertoires of practice required within these educational settings. Moreover, a number of studies indicate that teachers cross these cultural borders by negotiating and renegotiating these factors in light of their personal mechanisms, including teachers' early life experiences, teachers' racial and ethnic identities, teachers' beliefs and ideas about teaching and learning, and possible and plausible conventional actions [19], [20]. Thus, teachers who negotiate their border crossings in consideration of these personal mechanisms plan for science instruction that emerges from the lived experiences of their students. This results in knowledge construction that is more harmonious with students' everyday lives.

In this study, minority preservice teachers' learning to teach science is viewed as negotiating border crossings that result in science lessons that are more harmonious with their students' discursive repertoires of everyday lives. By learning about the border crossing experiences of minority preservice teachers, in relation to their negotiated meanings for these crossings, the researchers hoped to provide

insights about minority preservice science teachers' interactions with students.

## **5. Method**

### **5.1. Context for the Study**

The study was conducted in a teacher education program at a private university in northeast United States. The program offers a five-year combined bachelor's and master's program and prepares candidates to teach grades 1-6. During their first four years in the program elementary preservice teacher candidates take courses to major in a liberal arts and sciences area of their choice with a minor in education. The elementary science education methods course is taught in the fourth year of the teacher education program and includes a field observation component.

### **5.2. Participants**

Participants in this study were five female minority preservice teacher candidates: Salgado and Reyes (Hispanic), Silian and Nesbit (African-American), and San Pedro (Asian), (all pseudonyms). Participants' ages ranged from 20 to 25 years old.

### **5.3. Data Sources**

Data consisted of participants' drawings of their science instruction; narratives generated from these drawings; and self-review essays of participants' microteaching sessions. Drawings served as a link between participants' beliefs and their learning to teach science philosophies. The narratives allowed participants to describe their drawings and clarify their beliefs and perspectives about their learning to teach philosophies for the researchers. These narratives also allowed the researchers to validate meanings constructed from the participants' drawings.

Drawings as a projective research technique provide a good opportunity not only to reflect one's personal feelings and attitudes towards people and situations, but also to express the values, beliefs, worldviews, previous experiences, and conventional actions that are prevalent within a specific cultural environment [23]. Another data source was self-review essays of participants' microteaching sessions [24].

### **5.4. Data Collection**

Written prompts-“Draw a picture of yourself as a science teacher at work” and “Describe, in your own

words what is depicted in your drawing”- were administered to the participants at beginning of their elementary science methods course prior to any instruction on science teaching methods as described in the Instructional Procedures (Method) section of this paper. Participants completed their drawings and narratives during their regularly scheduled methods course time slot.

Self-reviews of participants' microteaching sessions were collected after participants had taken part in their respective microteaching sessions. The microteaching sessions followed the convention set by Brent and Thomson [25]; the goals for the microteaching sessions were presented to participants by the course instructor prior to the microteaching sessions.

### **5.5. Data Analysis**

Data were analyzed for norms, values, beliefs, expectations and conventional actions prevalent within drawings, narratives, and self-reviews of microteaching sessions that framed participants' negotiated meanings used to mediate the complexity of learning to teach science. First, data from narratives were cross referenced with Aikenhead & Jegede's [22] descriptions of the four types of border crossings (smooth, managed, hazardous, and impossible) using participants' perceptions about science teaching and science learning; and associated teaching actions. Second, participants' responses gathered from narratives were cross-analyzed with drawings and self-reviews from microteaching sessions respectively.

## **6. Findings**

Participants' conceptualizations of learning to teach science was expressed as two microcultures: participants' perceptions of science teaching, and their perceptions that defined the science classroom. Both microcultures were underscored by a set of norms, values, beliefs, expectations and conventional actions. In addition, participants had conceptualized a number of coping strategies for crossing between these two microcultures. The nature of this border crossing was hazardous.

### **6.1. Participants' Defined Microculture**

Participants' conceptualization of their science teaching included beliefs, conventional actions and expectations concerning their students, effective science teaching, and ineffective science teaching. First, in shaping their comprehension of what was to be planned and enacted in their science classrooms, participants alluded to the beliefs about their students. They believed that every student can learn science, deserves to learn science and that all

students are equal but may have different strengths and weaknesses. In addition, participants believed that it is important to respect all students, and that each student brings unique experiences and resources to the classroom, contributing to more rigorous science education. One conventional action that was mentioned to enact these beliefs was the need to implement group work. For example, Reyes claimed that “science relates to everything in our lives and is important to learn. We have to be sensitive to different cultures and values of students and it is important to respect all students. I know all students learn differently, but group work is effective and helps me with good classroom control (Narrative)”.

Second, participants believed that effective science teachers had a number of attributes: They were caring, fair, funny, helpful, honest, nice, positive, patient, respectful, sensitive, and understanding. But at the same time, as science teachers, they also had to be firm and stern. To enact these beliefs a number of conventional actions had to be implemented by science teachers: treat students with respect; make sure that all students get the most out of the science class; do not practice favoritism; enforce good classroom control; respect and value students’ remarks in class; and, be sensitive to diversity in the classroom.

Furthermore, they believed that science teachers’ content knowledge must relate to students’ lives, and must be fun and exciting. Participants mentioned that to enact these beliefs science teachers use a number of conventional actions: treat students as little scientists; form connections between home and school; use cooperative learning groups; adjust teaching to fit students’ needs; and, connect all students’ ideas to the science topic.

## 6.2. The Science Classroom Microculture

Participants’ conceptualization of the science classroom was underscored by the physical makeup of the classroom. The physical make up of the classroom was the visible cultural border participants visualized and crossed. Drawings showed that tables and chairs were arranged in ways to promote group work and active social interaction among the students rather than between students and participants. This finding was further corroborated by participants’ prior experiences and beliefs about teaching science from the self-reviews of their microteaching sessions.

Participants’ drawings were devoid of any drawings of their students or themselves: social interactions were thus devoid of students’ linguistic and cultural characteristics. There were no dialogue bubbles, written, or scribbled conversations between the teacher and students or between students, and no teaching resources (posters, laboratory benches,

models, science apparatuses, etc.) were apparent in their drawings.

## 6.3. Coping Strategies

Data revealed that when participants crossed from the microculture of their developing science teaching philosophies to the microculture of the science classroom, the border crossing was hazardous. The prevalent teaching action of grouping students was in direct correspondence to participants’ belief that science content should be available to all students and that all students can learn. Participants perceived group work as a coping strategy and assumed that group work will deter any prejudice, biasness or sexism from occurring in students’ science learning experiences in their classroom.

## 7. Discussion

In this study participants viewed the physical makeup of the classroom as a way to alleviate the belief that some students (in reference to minority students) are better than others in science. Thus, their drawings of tables and chairs were arranged more for group work and social interaction among the students (contextual) rather than between students and participants. Participants saw the physical makeup of the classroom as a cultural mediator [1], [4], [6], [7], [9], [11], but not themselves. It must noted prior knowledge and experience [1], [3], [4], [5], [6], [7], [8], [9], [10], [11], [12], [13], [18], did influence the participants personal mechanisms in mediating their learning to teach knowledge but this knowledge was not integrated with the cultural mediator role designation. Instead, participants in this study viewed the physical makeup of the classroom as pertinent tool to transform their pedagogical knowledge.

Although participants did not mention any threat to their self-esteem or ego, data showed that hazardous border crossings made by participants were negotiated using coping strategies like conformity and power [22]. Participants coped by conforming to the perception that their implementation of group work would prevent prejudice, bigotry and sexism in their science classroom. They perceived that power was achieved by how they controlled the physical makeup of the science classroom for science instruction: the way tables and chairs were arranged for group work. These coping strategies seemed to be the repertoires of practice that participants planned to implement in their science classrooms and were part of their developing pedagogical tools. Other than power and conformity, participants’ past experiences of being excluded from science learning activities were factored into border crossings. Participants believed



that by not repeating past injustices committed by their science teachers, like excluding minority students, like themselves, from science activities, was one of the values they had inculcate in the learning to teach science philosophies. Their own descriptions of their microcultures had a preponderance of beliefs and teaching actions that characterized the teacher as fair and respectful, and conforming to the idea that all children can learn science.

Even though participants' past experiences, beliefs, and coping strategies helped them conceptualize a socially just agenda for their students [9], science instruction that is not prejudiced, bias or sexist, they did not factor their own or their students' linguistic and cultural resources as key determinants in learning to teach science. It seemed that participants' ability to organize their science classrooms for their students to participate fully [15], [16] was underscored by participants' past experiences, coping strategies and beliefs about teaching.

Drawings and accompanying narratives, and microteaching sessions and self-review of microteaching sessions served as data that enabled preliminary views of how minority preservice teachers construct science instruction and provided connotative descriptions of their learning to teach science philosophies. Moreover, qualitative image/text balance provided by drawings, narratives and self-reviews fostered participants' reflection and understanding of their developing learning to teach philosophies. It must be mentioned that narratives accompany the drawing process as there is always the limitation that participants' sensitivity to depicting images of themselves and their students in drawings might result in inadequate insights into their emerging learning to teach philosophies.

## 8. Conclusion and Implications

Past experiences, beliefs and coping strategies framed minority preservice teachers' learning to teach science, and these very factors were involved in the negotiations used to construct science instruction. However, these three key determinants of participants' science instruction did not afford much in differentiating the teaching and learning interactions between themselves and their students. On qualitatively different factor in determining participants construction of science instruction strategy was their reference to past science learning experiences, especially those experiences that profoundly affected them in a racially and/or gender-based way.

Minority preservice teachers' past science learning experiences that have had a negative impact on them have to be identified and examined within the contexts of teacher education programs by

providing suitable supportive environments for reflection and understanding. Drawings can focus onto these negative science learning experiences and tease out emotional factors that underscore learning to teach science philosophies.

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# Research Funding System for Universities in Japan: A Case Study of National University Corporation

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## Abstract

*Focusing on policy establishment and operational process of a typical competitive funding-Grants-in-Aid for Scientific Research-among various grants financed by government and other sources of funds created by university-industry cooperation, this study aims at a comprehensive description of research funding system for universities in Japan through a case study of National University Corporation. At the same time, some existing issues are discussed which might reflect the limitations of the system.*

## 1. Introduction

Study of Connell states that the bulk of public funding for research was spent in the higher education sector when the decline in research undertaken by the public institution sector increased [2]. However, governments changed the forms of public research funds to universities, from unconditional grants to competitive grants (often targeted) or performance based funds, to limit “discretionary use” and required universities to be more accountable for using public research funds. At the same time, universities increased research funding from industry sources significantly, often with support from the government incentives. The Organizations of Economic Cooperation Development-OECD shows that the reform of funding mechanism for research institutions to link budget allocations to performance evaluation is becoming widespread in OECD and OECD non members countries [4], [5]. The networking and collaboration of industry, universities, research institutions and government agencies, are intensively fostered, bringing to universities more opportunities to raise other sources of fund through joint research, commissioned research or grants and endowments from industry [5].

In Japan, after the transformation of national universities into corporation since 2004, basic funding (operational funds), a subsidies financed by government to national universities has been cut down 1% every year, pushing up universities have to keep up quality to get more competitive research

funds from government and actively seeking for other sources of fund from industry side.

Grants-in-Aid for Scientific Research-hereafter called *Kakenhi*- is one of the characteristics of competitive funding systems that is representative of Japan. In FY 2009, Grants-in-Aid for Scientific Research – (193.2 billion yen) account for about 5% of entire budget for publicly funded science and technology research (approximately 3.6 trillion yen), and about 40% of the entire budget for competitive funding (approximately 481.3 billion yen) (JSPS, 2008). From 2001 to 2006, the share of higher education R&D (HERD) financed by government in Japan devoted between 0.45 to 0.35% of GDP and the share of higher education R&D financed by industry was around 0.45 to 0.43% of GDP at the same period shows the trend to invest for HERD from industry is higher than the investment from government in Japan [4], [5]. *Kakenhi* and *University-Industry Cooperation*, therefore, have become more important for scientific and technological activities at national universities.

The purpose of Grants-in-Aid for Scientific Research are competitive funds that are intended to significantly develop all scientific research (research based on the free ideas of the researchers), from basic to applied research in all fields, ranging from the human the humanities and social sciences to the natural sciences. The research projects are selected using a peer-review screening process (screening by multiple researchers whose field of specialization is close to that of application).

## 2. Material and Methods

To achieve the objectives are focusing on policy establishment, operational process of Grants-in-Aid for Scientific Research and creation of other sources of fund from university-industry cooperation, this study selected qualitative research methodology and conducted a case study at a national university corporation. In-depth interviews were used in three fieldworks to examine policy establishment for research funding system within selected university and governmental organization, as a funding agency through target persons were managers, professors and researchers. Similarly, for exploring the creation

of other sources of fund from university-industry cooperation, in-depth interviews also were carried-out with those who are involved in university-industry cooperation, namely university, mediator, and private company. Additionally, participation in related activities, reviewing literatures and analyzing relevant documents through obtaining and utilizing different published information sources assisted the study to approach the objectives.

### 3. Case study at Osaka University

Through research ability, research potential and research achievements, Osaka University could not only be representative for national universities in developing research and cooperation between university and industry but also could be an appropriate study field for carrying out a case study to explore the current situation of the whole research funding system in Japan

Established in 1931 as the sixth imperial university in Japan, one of the leading universities among 87 national university corporations in Japan, Osaka University aims at becoming “university’s fuller development as an education and research institution” (Osaka University Prospectus, 2008). In terms of raising funds for development of science and technology, Osaka University was ranked the third among top 30 universities in Japan that gain Grants in Aid for Scientific Research from JSPS in FY 2008 with 712 grants and amount disbursed 2,261,500 thousand yen. In terms of creating “third party-funding” from University-Industry Cooperation in FY 2006, Osaka University reached total of 17, 721 million yen from 10,027 such cases.

## 4. Results

Based on a case study of a representative national university corporation in term of Grants-in-Aid for Scientific Research, the obtained results of this study access to actual descriptions of the establishment of the policies for research funding within governmental organizations and universities and the operational process of grant allocation, grant control and grant evaluation. Other sources of fund could be created through university-industry cooperation are also presented to show the diversification of research funding system for universities in Japan at the moment.

### 4.1. Policy Establishment for Grants-in-Aid for Scientific Research

According to JSPS’s senior officer, Ministry of Education, Culture, Sports, Science and Technology (MEXT) and Japan Society for Promotion of Sciences (JSPS) are governmental organizations in charge of establishment of policies and regulations

for Grants-in-Aid for Scientific Research by formulating the government policy. JSPS has a Research Center for Science System which consists of about 100 part-time researchers who are universities’ professors to participate in process of making decision.

Establishing policy within universities became more important since universities have to create their own characteristics to compete against among each others in science and technology. As the case of Osaka University, Research University-Industry Collaboration Board (*Kenkyu Sangakurenkei Shitsu*) comprises 8 representative members who are professors from selected schools/faculties and 5 working groups inside *Kenkyu Sangakurenkei Shitsu* consists of about 10 to 15 professors who are deans of schools/faculties selecting what kind of research priorities or what kinds of fund that university should target and how to implement competitive funding programs, such as Grant-in-Aid for Scientific Research or COE (Centers of Excellence) and assist president making the final decisions for Scientific and technological policy and regulation.

### 4.2. Operational Process of Grants-in-Aid for Scientific Research

*Grant Allocation:* In November the researchers are required to prepare the entire prescribed application document via Electronic Application System. This process is two-tier screening which carried-out by the Scientific Grant Committee of JSPS. JSPS maintains a database of potential reviewers (about 41,000 registered names) of mainly university researchers who have previously been selected for *kakenhi* grants. Additionally, the Committee on Grants-in-Aid for Scientific Research consists of approximately 6,000 judges who have been selected from each academic field participating in screening process to ensure quality and justice among applicants. However, there is not most of researchers at universities sharing with the same viewpoints.

The notification of the selections results (disclosure of screening results) is made to the applicants via their affiliated research institutions. Information on the selected projects is available from the database of "Grants-in-Aid for Scientific Research" at the Global Environment for Networked Intellectual Information (GeNii). According to interviewees from governmental organization to university, the percentage of rating for application is only 20% is too strong competitive. Selection notification for new grants is made around the beginning of April upon the receipt of which the research project may begin. JSPS disburses grant funds to the researchers through the Department of Finance within university based on MEXT/JSPS’s guideline, in most cases.

In process of *Grant Control*, grant funds are distributed around mid-June after the researchers submit an application for disbursement and it is approved. The researchers are distributed 100% of direct fund by agency (JSPS), but through the Financial Department of the university, 30% indirect fund (indirect cost) also distributed to the researchers only in some special cases to support research activities. Researchers have autonomy in utilization of grants by MEXT/JSPS spending rules, excepting they are not allowed expense on cash. The deadline of utilization is by the 31<sup>st</sup> March of fiscal year, whereas researchers can carry over grant funds (for both direct fund and indirect) into the next fiscal year or adjust content of expenses items in their research expenditure plans. For other cases, they have to apply for authorization of adjustment. In some rule-break cases, the grant rules are not followed in using the funds, penalties may be levied including the stoppage or return of grant funds and the loss or restriction of grant application privileges.

*Grant Evaluation* requires the researcher making report and submitting to MEXT/JSPS for the grant transparency and accountability and quality of research results. Annual Grant Expenditure Report and Project Completion Report are to be submitted using the prescribed format to MEXT/JSPS. Project Completion Report is also submitted using the prescribed format to report the results of research to MEXT/JSPS the end of each fiscal year. Midterm self evaluation is conducted by the researchers themselves at the end of the third year of project that undertake in four years or longer duration.

#### **4.3. Other Sources of Fund from University-Industry Cooperation**

Universities are able to create other sources of funds from industrial partners by implementing cooperation programs: *Joint research* is one of cooperation programs to encourage researchers from university and industrial partners to produce excellent research achievements through joint research system; *Commissioned/consigned research* is commissioned contract from external parties such as companies, research institutions, municipalities, etc. through a commissioned research agreement; *Scholarship and donation (Kifukin)* are given by private corporations or individuals to university for the purpose of scientific research and educational activities through sponsored research agreements. However, from viewpoints of industrial side, universities are isolated and difficult to approach and seem to have a kind of unseen barrier between university and industrial side.

As the case of Osaka University, a model of university-industry cooperation is establishment of *Mediator* as Association for the Advancement of Manufacturing and Technology of Osaka University

to develop mutual understanding and match the needs and seeds of Osaka University and industrial partners. The main activities of this Association are publication (book, journal, article related to scientific and technology); events organization (seminar, exhibitions, and lectures) and business planning (commissioned research, joint research, scholarship and donation) However, according to Bureau Chief of Association, the model of establishment the association, as a mediator, for coordinating cooperation between university and industry is not popular in other universities in Japan .

## **5. Discussion**

Based on the obtained results of this study, the discussion will go into particulars in terms of policies establishment, operational process of a competitive funding and other sources of fund could be created by university-industry cooperation.

### **5.1. Establishment of Policy**

Policy establishment within government organization and universities for research funding is basically based on the policy formulation and decision making process show the coherence with the government national goals and basic plans. It is necessary for researchers to understand government policies before writing research proposals due to *Kakenhi* constrains their individual objectives and goals which should be in alignment with government national goals and policies.

As for the decision making process, according to Connell, “the ideal of collegial decision making process remains strong in many universities as a way in which academic staffs both belong to and make decisions within the institution [2].” In this process, governmental organizations and universities in Japan place much importance to the role of academic staff (professor/researchers) for establishing policies for research funding programs. As for the result, the government organizations and universities do not only receive the contributions of academic staff in research fields at professional levels, but they are also aware of the opinions and needs on their institution researcher’s side. These opinions are really helpful for making decision and adjustment of policies as well.

### **5.2. Operational Process of Grants-in-Aid for Scientific Research**

Connell states “since governments have placed unprecedented emphasis on research as a key driving knowledge society and economy, there were changes in the way research funds are available from government and other sponsors, ex: competitive allocation, target via priorities, performance based funding to concrete

effectiveness of resource allocation from government with the research outcome [2]". The OECD shows that the reform of funding mechanism for research institutions to link budget allocations to performance evaluation is becoming widespread in OECD and OECD non members countries [4], [5]. Similarly, competitive research funding system, grant fund is allocated after examination of application in Japan. Therefore, the important stage of operational process in competitive funding system in Japan is application screening of *grant allocation*. Strong points in the screening system are setting and maintaining database of potential reviewers mainly researchers who used to be former selected for competitive funds and using peer review (two stages) with participation of researchers in Scientific Committees ensure the process of screening is carried out both effectively and fairly. However, universities are not satisfied with the only 20% of selecting rate for applications (attributed by lack of budget). This rate is considered to be low and in need of being risen up 30%. The 20% selection rate limits the numbers of acceptable applicants leading to the limitation of research outcomes that would possibly contribute to society. Moreover, this causes some researchers to think that competitive fund is very hard to apply and thus it is less attractive for them.

In process of *grant control*, researchers have autonomy in utilization direct and indirect grant funds. However, the grant distribution (year by year), the spending timing and expenditure adjustment based on the expenditure plans are seen as the limitations that could affect research activities of the researchers. For instance, in case the researchers are not able to match well the expenses in their expenditure plans and in reality, the grant funds are not only used for research purposes, but sometimes they are also used just for the purpose of ensuring transparency and accountability by the researchers caused by the pressure in spending grant fund within one fiscal year. Thus, there are some difficulties in reducing the waste of spending and ensuring quality of research. Although the researchers can carry over grant funds (for both direct fund and indirect) into the next fiscal year or adjust content of expenses items in their research expenditure plans, but it is not incentive the researchers due to complicated administrative procedures required. The number of application for expenditure adjustment is increasing whereas the larger numbers of researchers think that they should try to spend grant funds in one fiscal year rather than get in troubles with required procedures.

*Grant evaluation* based on the effectiveness of grant utilization (income) and research quality (outcome). As for grant utilization, the annual expenditure report and project completion report the researchers should witnesses the effectiveness in the transparency and accountability of grant utilization. For the evaluation of the outcome research, only

some researchers are supposed to submit the research progress reports and undergo review and hearing by JSPS in the year before and in the last year of research. Meanwhile mid-term self evaluation reports are done by the researchers themselves at the end of third year (for 4 year or more than 4 year projects). Researchers said that it was not enough for them because they need feedback and consultancies for ongoing research. If the reviewing and hearing by JSPS were also carried out for midterm evaluation reports, the researchers could improve the quality of their researches based on the feedback and technical consultations. Thus, the quality of research outcomes could be ensured at the end of project whereas grant funds could be ensured not covering for low quality research projects until the end of project.

### 5.3. Other Sources of Fund from University-Industry Cooperation

Playing a vital role in diffusion of technology to industry and society, universities are able to establish university-industry cooperation for *other sources of funds* from collaboration programs. The study of Dooley and Kirk discussed that to establish and sustain collaboration, university and industry must gain mutual benefits from the interactions [3]. The result of this study showed that from industrial side universities are isolated and it is difficult for potential industrial partners to approach. Thus, mediators could be good solution for universities and industrial partners to break down such barriers, create and promote the mutual understanding.

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# Does Public Education Prepare Students with 21st Century Skills? Perspectives of Elementary School Teachers on the Curriculum and Administrative Support

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## Abstract

*Canadian children in the 21st century, or the Information Age, live in a world vastly different from their predecessors in the Industrial Age. Yet elementary schools in Canada do not reflect these changes. The present qualitative study explored the perspective of elementary teachers on how public education is preparing students with 21st century skills, focusing on the curriculum and support received by school administration. Five elementary teachers were interviewed. Participants' responses reveal that because the Ontario curriculum is not reflecting 21st century skills [i.e., technology, media literacy, and social skills] they are not teaching 21st century skills as well as they could. Furthermore, the participants believed they needed more professional development/workshops/conferences on how to teach 21st century skills to their students and more classroom resources. The most common theme throughout participants' responses was technology. Recommendations on the curriculum and training/support by school administration were made based on the findings.*

## 1. Introduction

In our fast developing society things change constantly. Paper and pencil has, for the most part, been replaced by digital ways of writing. Communication has moved from analog to digital and made transmission of information easier. Advertising has become part of the digital age by stuffing more information into a given time space. Even playing has become digitalized through the use of computer technology with hand held devices. Society has moved out of the Industrial Age and into an Information Age which has the power to swamp humans with a deluge of facts and figures.

Researchers and educators argue that the fundamental structure of primary education continues to be based upon a century old value system; a system that is in its entirety not relevant to today's students [1], [2], [4], [5]. Do teachers feel prepared to teach these students 21st century skills? According to Lappan "we need to prepare teachers so that they have the know how to be the flexible

problem solvers in the area of teaching that society needs in the 21st century" [7]. In this study, I will seek to explore teachers' perspectives of how schools are preparing them to teach 21st century skills with a focus on the curriculum and professional development.

## 2. Literature Review

In 1969 when referring to technological change and education, Postman and Weingartner stated, "You seldom, if ever, have an old environment plus a new element...What you have is a totally new environment requiring a whole new repertoire of survival strategies" [10]. The same principal can be applied to the 21st century. What are these 21st century skills? There are many articles devoted to convincing the reader what skills should be taught to students in a changing 21st century society. Kohn [5] takes it as far as saying we need to be preparing students for the 22nd century. According to McCain the most effective way to teach 21st century students for learning is to provide a real-world curriculum [8]. He proposes six ways to teach independence and higher learning in 21st century students: resist to 'tell', stop decontextualizing content, scaffolding over time, stop giving our students the final product of our thinking, make a shift in our thinking (problems first and teaching second), and re-evaluate student evaluation. McCain bases his six ways of teaching 21st century students effectively on learning models as well as 21st century principles. For example, he explains how students come to the class with awareness of the world (from access to information) thus a teacher's role should change to reflect this. Instead of 'telling' their students information they should help students make sense of the information they have. The desire to 'tell' students takes the excitement away from learning and self-discovery. He explains how Carl Rogers claimed that self-discovered and self-directed learning is the only learning that significantly influences a person's behaviour. If students are not internally motivated, when they leave the classroom they will not be able to apply what was taught to them in the classroom to real-life situations.

Christen also focuses on the notion of providing a “real-world” curriculum. She suggests that education transforms to align the “how” and “what” with the students and the real world [2]. This entails instruction that reflects the student’s lives outside the classroom, curricula that reflects skills for the workforce, technology and pedagogy be more effectively integrated, and partnerships that strengthen pedagogy. Christen puts an emphasis on creating curricula to prepare students for the global economy. She argues that most of workplace skills taught in education focus on industrial economy rather than the new information economy. She suggests that the focus be put on soft skills such as collaboration, customer satisfaction, and cross-functional leadership.

Shaw on the other hand, suggests that authentic education for 21st century students address the “whole child” rather than limiting the curriculum and skills for workplace readiness [11]. This includes an “interdisciplinary, integrated and project-based” curricula that incorporates collaboration (the ability to work in teams), critical thinking (solving complex problems), oral communications (presenting), written communications (writing), technology, citizenship (take on civic and global issues), learn about careers (through internships), and content (research on all the above). These skills will help engage students in learning and prepare them for real-life situations.

Lambert and Cuper claim that students need time and opportunities for reflection and critical thinking [6]. Students are bombarded with information from the internet, media, and peers. But not all the information is correct. For example, Kelly explains how anyone can post information on the internet and claim that it is accurate [4]. Critical thinking and reflection help students question the information for its accuracy and reliability. Furthermore, Lambert and Cuper argue that reflection and critical thinking enables students to learn from experience. Therefore, time needs to be built into classroom instruction for both processes to occur.

Another skill for 21st century students is lifelong learning and motivation. “In this environment it is critical that we shift our focus from education to lifelong learning [1]. Internal motivation teaches students skills for lifelong learning. Kohn argues that a curriculum filled with tasks of memorizing facts and the right answers stifles the natural curiosity to learn in children [5]. As a result, children complete school work more for reward (i.e., grades) and less for the satisfaction of learning. When children are excited about what they are doing they tend to seek out the skills they need to do it well. But when they lack the interest, learning tends to be less permanent and successful. In order for students to be motivated to seek out lifelong learning skills they first have to be taught topics that appeal to their interests. The idea of lifelong learning centers on the individual as

a self-directed learner, away from the idea of an educated individual. The student who becomes a lifelong learner is equipped (i.e., skills, information, and attitude) to respond to the demands of living in a knowledge-based society and economy [13].

### 3. Analysis of Findings

From the interviews 4 themes were revealed: 21st century skills, curriculum, training and support, and technology.

#### 3.1. 21st Century Skills

The 21st century skills that teachers in the study felt students required were critical thinking [e.g. deciphering which information is important and relevant], problem solving [e.g. identifying a problem, solving a problem, following through with a solution], global awareness [i.e. being aware of global events], workplace skills [i.e. working in groups, deadlines], media literacy [i.e. being aware of consumerism, advertising, overt and implied message], relating text to the world and to ourselves, lifelong learning, social skills [i.e. face to face communication, respect], and initiative taking. Technology and critical thinking were most often mentioned by all participants. Of my participants, 3 belonged to the age category of 25- 30 and had less than four years of teaching experience [including practicum teaching]. When answering the question of how 21st century skills differed from previous generations or years they could only speak to the minimal years of teaching experience and what they have seen in public. Participant 1 had been teaching for 28 years and was the only participant able to speak to what degree the skills had changed from previous generations. However, based on what knowledge the participants did have from their teaching experience, what they have observed in public, and from their own experiences in elementary school they were able to provide insight into how 21st century skills have changed. It seems that the skills, referred to in this study as 21st century skills, have been required from students prior to the 21st century, in previous generations or years. The difference in the 21st century skills today is one of emphasis on the massive increase of information flow. Students now need their skills to be sharper in order to succeed in the workforce. For example, they need to be more computer savvy to respond to the increase usage of technology in the workplace and society in general and they need to incorporate more critical thinking in everyday thinking to respond to the overload of information from the internet and in the media.



### 3.2. Curriculum

All of my participants reported that the curriculum does not reflect all 21st century skills. Furthermore, the participants felt that an improvement in how the curriculum reflects 21<sup>st</sup> century skills would help them better prepare students for an ever changing world. When asked, the participants expressed how they were comfortable going beyond the curriculum [i.e. using more technology than was called for in the curriculum, teaching more media literacy] but only to a certain extent; “We still have to conform to the standards”. Some participants suggested the curriculum incorporate more media literacy, technology [e.g. computer skills], and social skills. They found these skills to be less developed in their students.

It seems that teacher’s interpretation of the curriculum was a key factor in how well they taught 21st century skills. Participant 5 reported that some teachers follow the curriculum too closely and do not think outside the box in planning lessons and as a result they do not teach 21st century skills. In addition participant 4 mentioned that the curriculum has to be specific because some teachers cannot think beyond it. On the other hand, participant 3 reported that the curriculum does not reflect what teachers are actually doing in the classroom [i.e. teaching 21st century skills] and that teachers are actually doing well in teaching 21st century skills. She also mentioned that the curriculum would be ideal providing that there were only 20 students in the class, all at the same level, and ample time to go over everything.

While there has been an information explosion since the early 1990s it would appear that the curriculum has not managed to keep pace. This is partly due to the nature of the educational system which is traditionally reactive rather than proactive as well as conservative in nature in order to satisfy a broad population of expectations. Even so the amount of change which has taken place has been significant. Participant 1 explained how the curriculum has increased the content delivered to students and the pace of that content. “Kids are forced to do today what kids did years ago in a month”. He explained how he saw the curriculum changing about 10 years ago and believed this was a response to the internet that was able to make access to information easier and in this way increased the volume of information available. These results suggest that teachers do see a need to revamp the curriculum to reflect 21st century skills. But because the educational system has not responded fast enough the gap has to be made up by individual teachers which require using up their planning time or their free time.

### 3.3. Training and Support

The question that arose from the literature was: if teachers are not trained or do not receive support from school administration, how are they expected to prepare students with 21st century skills? Also in the literature it was reported that some teachers are not equipped with the skills and know-how to prepare students with 21<sup>st</sup> century skills [12]. The results from the present study showed that teachers do receive training in the form of professional development, workshops, and conferences. However, it seems that the participants felt they needed more professional development [PD] days and better support from the principal. They felt that PD days were not frequent enough and often did not cover skills that were necessary to prepare them to teach 21st century skills. For example, participant 3 explained how she would often skip her optional PD days because she found them to be useless. She suggested that the principal take a survey of what teachers felt the PD sessions should cover. Participant 1 stated, “They come to you with a new idea that they are excited about but there is no real reinforcement. And there is no manpower behind it so teachers are left to figure it out on their own”. In addition, participant 2 explained how she often felt frustrated because her principal will host only one PD day or workshop on a new computer software program. Given the growing complexity of many of the programs teachers are left to figure it out for themselves which all too often does not happen because there are so many demands on their time. Often the PD consists of only a presentation and the teacher does not receive any hands on time. Additional training time was a common theme among all the participants.

Participant 2 also explained how she often attended professional conferences in the first year of her teaching career to update her skills but was denied permission to attend any other years because the school was unable to pay for a supply teacher. She commented that professional development should be a constant occurrence because teacher’s skills have to be updated frequently. She suggested that budgets be revised to incorporate more professional development and supply coverage.

Another common theme is lack of support from school administrators. Participant 2 and 4 explained how it was a daunting process to get approval on the use of new software programs unless the principal is in agreement. Participant 1 noted that the role of principal has changed over the years and that they themselves are often in need of support. This makes it even more difficult for them to in turn support teachers.

### 3.4. Technology

Technology is often cited in the literature as the main 21st century skill students need [3; 9; 12]. In my research, technology was a theme throughout participants' responses of a 21st skill that students require but which was not supported within the curriculum or by professional development.

Although technology was often referred to in participant's responses, I found the term technology to be used loosely and seemed to represent a wide range of things. This inconsistency in the term was seen within participants' responses and between participants' interviews. For example, between participants, or when comparing participant's interviews, participant 3 used the term technology to refer to formatting, spreadsheets, and emails while participant 4 used technology to refer to online search tools [i.e. Google, online encyclopedias]. Within participants' interviews, participant 5 referred to technology as technological tools used in the classroom [e.g. Smartboards] when answering question five and cell phones and other handheld devices when answering question 3.

The use of the term technology interchangeably makes it difficult to understand what needs surround this area in education and need to be addressed. For example, the participants expressed how they needed more training on technology. However, it is unclear which aspect of technology they are referring to [e.g. integrating technology in lesson plans or how to deal with technology when it breaks down].

Technology was responsible for other 21<sup>st</sup> century skills required by students directly and indirectly. Participant 2 stated, "I attribute technology mostly for this change. It is everywhere and it is interfering with the school. It may benefit students on a personal level but I strongly feel that it is having a negative impact on students learning." Participant 3 stated, "I think it is society and even the economy. The skills they need to get a job have to be sharper and they have to know technology." Participant 4 stated, "I think its society. Technology is everywhere in our society and increasing so rapidly. And there is a certain level that employees expect. They don't want to have to train their employees." All the factors involved in creating this 21st century set of skills seemed to be interconnected and related to technology.

The theme of technology also ran through participant's responses about training and support by school administration. All participants reported that extra professional development and training would help them better prepare students with 21st century skills. Not having knowledge and lack of training meant that the technology was not often used in the classroom. Participant 2 reported "We have seven Smart Boards that in a sense are a waste of money because no one knows how to set them up".

Teacher's time was also an important theme that ran through the results. Interfering with teacher's free time often led to frustration. For example, participant 2 stated, "The problem with technology is that it often breaks down or what happens when the Internet is down then the teacher spent all this time preparing for the lesson that they are not using anymore and they wasted time setting it up and they have 27 students sitting there starring at them". On the other hand participant 3 mentioned having her students, who are mentioned in the literature as digital gurus [11], fix the technology problems. But when it came to installing software on computers teachers are not permitted to install it. A school board technician has to come and install any programs or software. Participants mentioned several problems with this: Firstly, there are only a few technicians for the school board, so often teachers have to wait. Secondly, technicians may realize they have to order parts or consult a colleague on a problem resulting in pushing back installation. Last, some students rely on computer software to learn. For example, Dragon Speak is a computer program used by Special Education students who have difficulties writing. When there are problems with the school computers, these students are left behind.

There seems to be a disdain for technology experienced by the participants. Several times they acknowledged how technology is increasing in the lives of students and "ruining" education. Consistent with the literature this is because schools are not up to par with the advancement of technology in society. It may also be because of the lack of training and support for using technology. Participant 3 mentioned how she is a graduate of a teachers college which focuses heavily on technology in the classroom. She felt prepared to use technology in the classroom, but it wasn't supported properly by her school and administration. The gap that is created between students and schools has to be made up by individual teachers. Participant 4 summed it up nicely by stating, "Everyone has some sort of TV game or computer game or whatever in their home so they are used to using technology. It's almost as though they are bored in the classroom if technology is not being used." Participant 1 described how schools are slow to adapt to society because of pressure from parents. "Parents want a consistent report card- quote". Participant 2 felt that schools do not need to change and reflect what is going on in society because of limited funding. Participant 2 also added that it was teachers who were resistant to change.

### 4. Contribution to Knowledge

Based on the results of this study the following recommendations were made to the primary

education Ontario Curriculum and teacher training and administrative support:

#### 4.1. Curriculum

- curriculum designers need to understand that students do not view the world in the same terms as they do, and as a consequence have different needs – this will help them bring the curriculum more in line with 21st century skills;
- should increase more hands on learning experience with computers, digital devices, computer programs [e.g. Powerpoint, Excel, Word, Moodle, Internet, Computer learning programs] in the Ontario Curriculum, grades one to eight specifically as well as other areas [the cost of this will be prohibitive];
- should deal more thoroughly with media literacy in terms of consumer awareness, the power and purpose of advertising, and the validation of claims made by commercials;
- the importance of media literacy should be denoted by introducing it at the grade one level and setting out a clear course of study as the grades unfold;
- develop awareness of proper use of text and slang language and incorporate English spelling and grammar all subjects;
- develop the use of projects and diminish the use of rote exercises while finding a valid ration between individual effort and group work when problem solving;
- design culture and value inclusiveness into existing programs through teacher sensitivity training;
- provide individual teachers with more opportunity to insert their own interests and passions into the curriculum as part of a wide and cohesive set of teaching goals [as seen in the Ontario Curriculum, grades one to eight];
- should include educators at all levels of curriculum development;

#### 4.2. Teacher Training

- reduce amount of time given to team building from top down and provide more content of interest determined through surveys for Professional Development;
- have request forms available to teachers so they can anonymously ask for additional PD;
- hire more IT professionals for the school board;
- Professional development should include coaching or mentoring within the school and school district.

#### 5. Conclusions

According to the participants in this study, the skill set required of students in the 21<sup>st</sup> century are different than other generations. As a result they reported public education needs to change to update

the skills it teaches students. Furthermore, the curriculum needs to incorporate technology, social skills, media literacy, critical thinking, and problem solving. Teacher training and administrative support needs to be more frequent and focus on what skills teachers want and need to learn or develop.

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## **Session 27: Cross-disciplinary Areas of Education**

Bahrain Teachers Candidates' Views of Nature of Science: A Phenomenographic Study  
(Funda Ornek)

Teachers' Perceptions of Actual Approaches to Supervision and their Perceived Connection to Professional Development in Selected Jordanian High Schools  
(Khaled Ali Al Sarhan)

The Relationship between Science Questions, Levels of Perceived Confidence and Science Answers: Patterns in Data Collected through an Interactive Response System  
(Neil Taylor, Lorraine Syme-Smith, Susan Rodrigues, Colette Fortuna, Margaret Cameron)

An Assessment of Predisposing Factors to Peer Victimization among Secondary School Students: Implications for Counselling  
(Adefunke Serifat Ehindero)

# Bahrain Teachers Candidates' Views of Nature of Science: A Phenomenographic Study

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## Abstract

*Current approaches in Science Education is to enable students to develop an understanding of nature of science, develop fundamental scientific concepts, and develop the ability to structure, analyze, reason, and communicate effectively as they pose, solve, and interpret scientific problems, set goals and regulate their own learning by doing science and learn to reason scientifically. This study will consider Views of Nature of Science (NOS) of Teachers Candidates (TC) instructional practice to promote TCs' appropriate Nature of Science (NOS) views. Methodology for this brief study includes: Using VNOS-C, Myths of Science survey, associated interviews I will track the changes in NOS views of TCs throughout their Bed programme by using the VNOS-D. The science program includes explicit-reflective activities that emphasize constructivist-inquiry-based instruction to help TCs improve their and their students' views of NOS. Analysis of the surveys and interviews will be conducted and the results on the instructional practice of the nature of science will be shared and discussed.*

## 1. Introduction

Enhancing students understanding of nature of science (NOS) is crucial for achieving scientific literacy and a major and significant goal of all recent reform movements in science education [1]. Nature of science (NOS) and its characteristics were defined based on the way scientific knowledge is developed [15]. These aspects include that scientific knowledge is tentative which is subject to change; empirically based on and/or derived from observations of natural world; subjective because scientific knowledge is influenced by scientists' background and experiences; product of human imagination and creativity which involve invention of explanations; and socially and culturally embedded; the distinctions between observations and inferences [12].

Research studies have shown that students hold naive views of NOS [17], [21], [4], [12]. To promote students' understanding of NOS, different curricular and research studies were developed and conducted, however it was found that these attempts were mainly ineffective to promote students'

understanding of NOS [9], [19], [12]. Abd-El-Khalick and Lederman [2] stated that these attempts were ineffective because it was assumed that students would learn NOS automatically as a result of studying science by inquiry activities. Therefore that recommended an instruction approach of NOS that integrates basics from history and philosophy of science and constructivist-inquiry activities. In this approach, students can reflect on NOS aspects based on their engagement on the activities.

## 2. Research Rationale

The present study aimed to investigate Teachers Candidates' views of NOS by using phenomenographic approach and the influence of an explicit constructivist-inquiry oriented approach on TCs' views of NOS and the development of their views of NOS as a result of the approach. Development of NOS views means the progression of TCs' views over time in this study. Three research questions guided the study:

1. What are TCs' views of NOS?
2. What is the influence of the explicit constructivist-inquiry oriented approach on TCs' views of NOS?
3. How do TCs' understandings of NOS develop throughout their BEd programme?

## 3. Methodology

The research design is guided significantly by the literature surveys, VNOS-C, VNOS-D, Myths of Science survey, and interviews and based on qualitative methodology. The surveys have open-ended questions and statements asking what TCs think about NOS.

The study will involve second year BEd Teacher Candidates who are in Cycle 1 (Lower Primary level) and Cycle 2 (Upper Primary level) with specialization in Math and Science. Teacher Candidates in Cycle 1 and 2 are required to take Physical Sciences course which the study will take place into. This study will involve 2 key phases.

**Phase 1:** In Fall 2009, review of the literature is in progress and the surveys will be administered to BEd Math and Science students in Cycle 1 and 2. The volunteers will be asked to participate to the study for interviews and interviews will be conducted.

Semi-structured interviews with volunteers will be conducted to probe teacher candidates' views of NOS and how they change their ideas throughout their programme.

**Phase 2:** Review of the literature will continue. Data will be analyzed. Interviews will continue with volunteers. A workshop will be conducted with TCs about NOS and videotaped the workshop so that their understanding of NOS can be tracked (Spring 2010). The following procedures will be carried out for data analysis:

- All interviews will be transcribed.
- Video records will be transcribed and edited to present in the conferences.
- The data from surveys will be analyzed.
- For analyzing qualitative data, ATLAS TI data management will be used.

### 3.1. Theoretical framework for the study: Phenomenography

Since this study is concerned with Science Teacher Candidates' views and understanding of NOS, the design of this qualitative study is viewed within a phenomenographic framework in the first year of study. Phenomenographic framework is the study of the different ways in which people experience the world. In other words, its aim is to discover the range of ways people in a group experience, conceptualize, notice, and understand various aspects of phenomena in the world around them [18]. In phenomenographic research, the researcher chooses to study how people experience a given phenomenon. Phenomenographic framework is used to ascertain how TCs understand NOS.

## 4. Conclusion

The development of informed views of NOS among students is a major goal for science education as described in all major reform movements in science education [1] because the nature of science has renewed attention in science education circles as a primary component of scientific literacy [1], [5], [13], [10]. Teaching children to simply recall scientific facts, laws, and theories is not enough. Rather, teachers and science educators want students to know why scientific knowledge and ideas have merit and may be trusted. In addition, we want our students to know how things work around us. Therefore, it is essential to begin with the nature of science. The ultimate goal of scientific literacy is to make a link to nature of science instruction. That's; we need to improve citizens' abilities to make reasonable decisions in a world increasingly impacted by the processes and products of science [6], [7], [8], [11], [14], [16], [20], [22]. A little research exists delineating the role of one's

understanding of the nature of science. Aspects of the nature of science that are considered to be important objectives of science education include understanding the nature, production, and validation of scientific knowledge; the internal and external sociology of science; and the people and processes of science [3].

So, investigating Teacher Candidates' views of Nature of Science will have implications not only for the continuing development of future NOS teaching modules but also for science teacher educators who wish to design modules for NOS.

The results of this would generate significant repercussions in pedagogy, teaching practice and curriculum development.

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# Teachers' Perceptions of Actual Approaches to Supervision and Their Perceived Connection to Professional Development in Selected Jordanian High Schools

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## Abstract

*The teachers' role in education is a complicated process that brings various facets into the play. The purpose of teacher education and other professional development experiences is to promote the learning and growth of teachers as a persons and professionals, which reflects in enabling teachers to be more adept in a broad range of instructional strategies, including building positive relationships with students, parents, administration and professional colleagues. This paper focuses on the supervisory process practiced in the Jordanian schools and the collaborative effort reflecting the professional concerns of the individual teacher as a response to the Jordanian educational reform.*

## 1. Introduction

One of the most expectations of educational supervision is to meet this developmental need in order to maintain effective teaching and provide sufficient resources for teachers, and to enhance collaborative teaching between educators as developing adults, and, as indirect effect, to enhance the students' learning. Although there is variety of persons may be involved in improving classroom and school instruction, the "supervisor" in the Jordanian educational context is usually referred to the instructional specialists employed for this goal, and the supervisor is always outside the school staff since supervision had been based on hierarchical principles.

This paradigm asserts that the role of the teacher is to transfer basic knowledge and truths to students, whereas the role of the supervisor is to serve as the "inspector" to ensure the curriculum had been followed and essential skills had been practiced in the classroom context [10]. As this hierarchical principle became more common by years, many teachers adopt the belief that asking supervisors for help or seeking collegial assistance are signs for weaknesses in their teaching, which could be reflected later in low evaluations and possible punitive actions. As Ebmeier and Nicklaus noted, if the supervision process emphasized the evaluation

component the possibility of nurturing collegiality, collaboration, and reflective practice will be reduced significantly.

Redefinition of supervision, according to Sergiovanni and Starratt, includes the disconnection of supervision from hierarchical roles and is reflected in Jordan as "School as the Development Unit" project in which supervision was viewed as a more democratic and professional process, involving multiple skills that are equally available to teachers and supervisors [21]. This new paradigm of supervision embraces different configurations of teachers as colleagues working together to increase the understanding of their practice. And this becomes the supervision paradigm that the Ministry of Education in Jordan is fighting to adopt; a paradigm that joins the staff development and supervision in a way that they are often indistinguishable. This shift in supervisory roles and practices is expected to take place in the Jordanian educational setting by the impetus of Educational Reform for Knowledge Economy (ERfKE) that is now directing all changes in the Jordanian Educational Initiatives. Many researchers emphasized the importance of the collaborative effort of all participants involved in the supervisory process [3], [13], [15], [21].

## 2. The Purpose of the Study

The purpose of the study was to examine teachers' perceptions of actual approaches to supervision and their perceived connection to professional development in selected Jordanian high schools.

## 3. The main Research Questions

The following questions served as a guide in this research:

1. What are the perceptions of Jordanian high school teachers regarding the supervision process?
2. What are the perceptions of Jordanian high school teachers regarding the actual supervisory practices?
3. What are the perceptions of Jordanian high school teachers regarding the relationship between actual supervisory practices and professional development?



4. Are there any statistically significant differences in the perceptions of Jordanian high school teachers regarding: the supervision process, actual supervisory practices and the relationship between actual supervisory practices and professional development that might be attributed to their experience: experienced / novice?

#### **4. Significance of the Research**

The research findings provided insight into the shift in Jordanian teachers' perceptions of supervision and thus determined if teachers were satisfied with the current practices and their influence on their professional development. The study was concerned with the enhancement of teachers' professional roles. The importance of teacher voice and teacher collaboration was reinforced.

The stress on collegiality was initiated by the recent research in the field that emphasized the shift from inspectorial to collaborative approaches to supervision [2].

#### **5. Professional development**

This teacher-directed process occurs over a period of time, leading to the professional growth for the teacher. Professional development is a vital component of ongoing teacher education and is central to the role of principals and teachers. This development is concerned with improving teachers' instructional methods, their ability to adapt instruction to meet students' needs, and their classroom management skills; and with establishing a professional culture that relies on shared beliefs about the importance of teaching and learning and that emphasizes teacher collegiality [28].

##### **5.1. Clinical supervision**

This is a process of supervision of classroom instruction for the improvement of professional growth, which usually consists of several phases, including pre-conference, observation, and post-conference [13], [16].

##### **5.2. Peer coaching**

A process of supervision in which teachers work collaboratively in pairs and small teams or cohorts to improve instruction [3]. Peer coaching may be a planned or incidental activity. Generally peer coaching occurs in the classroom where one teacher observes another and provides feedback. It may also take place in a conferencing situation away from the classroom.

##### **5.3. Cognitive coaching**

A process where teacher coaches are trained to ask questions that allow teachers to explore thinking behind their practices [12]. Costa and Garmston defined it as a nonjudgmental process built around a planning conference, observation, and a reflecting conference, in which the supervisor attempts to facilitate teacher learning through a problem-solving approach by using questions to stimulate the teacher's thinking [7].

##### **5.4. Mentoring**

This is a process that facilitates instructional improvement wherein an experienced educator (mentor) works with a novice or less experienced teacher collaboratively and nonjudgmental to study and deliberate on ways instruction in the classroom may be improved [25].

##### **5.5. Self-directed development**

A process by which a teacher systematically plans for his or her own professional growth [14]. This process is also called reflective coaching [8]. During this process supervisors allow teachers to engage in reflection about their own teaching, thus the teacher becomes the primary generator of knowledge.

##### **5.6. Portfolios**

Teacher-compiled collections of artifacts, reproductions, testimonials, and productions that represent the teacher's professional growth and abilities [19]. Portfolios can be used to support and enrich mentoring and coaching relationships.

##### **5.7. Professional growth plans**

Individual goal-setting activities, long-term projects teachers develop and carry out (McGreal, as cited in Brandt [6]). The teachers reflect on their instructional and professional goals and become more active participants in the assessment process by describing intended outcome and plans for achieving the goals.

#### **6. Literature Review**

Supervision of instruction is closely connected with professional development. This connection has been the theme of a thorough study in recent decades [3], [15], [28]. The importance of the connection between supervision and professional development cannot be underestimated. Supervision in this case can be viewed as the function that draws all

participants of school teaching-learning process together.

Sergiovanni and Starratt viewed schools as learning communities where students, teachers, and supervisors alike are learners and teachers depending on circumstances [21]. Sergiovanni stated that if teacher development is to move to center stage in the school improvement process, then schools need to create the kinds of supervisory systems and growth strategies that encourage reflection, acknowledge teacher individuality, and emphasize collaborative relationships [20]. Interaction between the supervisors and teachers is an asset for effective and collaborative professional development.

Beach and Reinhartz emphasized that our view of supervision should not be “one in which teachers are ‘lacking’ or deficient, and supervisors have what it takes to ‘fix’ the deficiency” [3]. On the contrary, as a catalyst, a guide, a supporter, or an encourager, the supervisor together with teachers moves along an infinite growth continuum. The primary goal of the contemporary supervisor is not just to solve the problems, but to encourage teachers to jointly study all teaching related activities. Crucial for a successful teacher-supervisor relationship is the establishment of trust and collaboration. A significant role of supervisors is to provide teachers an opportunity to make professional decisions regarding their own development and trust them with its outcome.

The problem arises that often supervisory and evaluative processes go hand in hand. Teachers want to improve and should see supervision as a tool towards professional development. Central office administrators want a system in place to provide accountability. “Teachers want supervision that is supportive, helpful, and nonjudgmental, but central administration often expects supervision to be instrumental, enforcing the organizations expectations and seeking goal achievement” [1]. But, as it was argued by the STF (2002), though different in primary purpose, evaluation and supervision are essential for effective teaching and learning, student achievement, and teacher success. While supervision is necessary for teacher growth, evaluation is necessary to determine this growth and teacher effectiveness [29].

## 7. Models of Supervision

Writers differentiate between several models of supervision upon which educational leaders and teachers can draw. In order to be effective, supervision policy cannot rely exclusively on one model, but should combine their best characteristics, as each process has distinct qualities that can contribute to teachers’ growth and development as they seek to improve instruction. Cogan, Anderson, and Krajewski (as cited in Blase and Blase [5]) classified supervision approaches that appeared in

the professional literature between 1850 and 1990 as follows:

1. Scientific management;
2. Democratic interaction approach;
3. Cooperative supervision;
4. Supervision as curriculum development;
5. Clinical supervision;
6. Group dynamics and peer emphasis;
7. Coaching and instructional supervision.

Duffy, however, stated that there are only two leading models of teacher supervision [9]. One, which dominates the literature and is seen occasionally in practice, is clinical supervision, where supervisors observe classroom teaching, make notes, analyze, and share the results with the teacher, assuming that the feedback will help the teacher improve his or her performance [16]. The other model, found overwhelmingly in practice and disdained in the supervision literature, is performance evaluation otherwise called administrative monitoring, and is an occasional surprise observation of classroom teaching [14].

Recent researches mentioned two broad models of instructional supervision that have been very effective over the last years: differentiated and developmental types of supervision. Differentiated supervision is an approach to supervision that provides teachers with options about the kinds of supervisory services they are offered [13], [14]. It assumes that, regardless of experiences and competence, all teachers will be involved in the three related processes for improving instruction: teacher evaluation, staff development, and informal observations. “The differentiated system builds upon...intensive development (or clinical supervision), cooperative development, and self-directed development”.

Developmental supervision assumes that teachers are professionals at different levels of development and require particular approach to supervision [15]. This model utilizes three approaches to supervision: directive, collaborative, and non-directive. The developmental model places emphasis on professional development of all the participants of instructional process [26]. Sergiovanni and Starratt developed a schema for organizing supervisory practice for teachers [21]. They advocated that all supervision plans be organized around a minimum of five options with teachers playing key roles in deciding which options best address their needs at a given time. The organizing theme for their options is professional authority. This model uses five options: clinical, collegial, self-directed, informal, and inquiry-based supervision.

One of the most recent models of supervision advocated by many scholars is reflective supervision [18]. Among the approaches utilized by this model are collaborative supervision, self-reflection, and inquiry-based supervision (otherwise called action

research [27]. To carry out reflective practices and related aspects of professional growth, teachers require appropriate opportunities, supports, and resources (STF, 2002).

## 7. Providing Options for Teachers

The educational practice of instructional supervision appears to be a contentious issue in contemporary educational circles, and it has been characterized by shifting attitudes among researchers and educators alike. Sergiovanni and Starratt stated that contemporary schools need to provide teachers with options in supervisory approaches. The set of approaches may differ for beginning and experienced teachers. In response to the concerns about the state of supervisory practices for beginning teachers, alternative models of supervision have arisen and taken hold over the past two decades. Sergiovanni and Starratt also noted that these models of supervision refer to face-to-face contact with teachers with the intent of improving instruction and increasing professional growth. The shift here is toward viewing supervision as a process “designed to help teachers and supervisors learn more about their practice, to be better able to use their knowledge and skills to observe parents and schools, and to make the school a more effective learning community” (p. 50). Rikard (as cited in Shively and Poetter, [23]) stated that new models that envision the possibility that teachers themselves can provide the kind of supervisory leadership necessary for strengthening teaching and programs for beginning teachers are taking hold and proving to be effective. Administrators and teachers in the schools with programs that support teacher education programs can be well-equipped to supervise beginning teachers. As Sullivan and Glanz stated, the major finding that emerged from their research was that certain leadership and implementation practices promoted the successful implementation of alternative approaches to supervision, such as mentoring, peer coaching, peer assessment, portfolios, and action research [24]. The proper use of various approaches to supervision can enhance teacher’s professional development and improve instructional efficiency.

The following review differentiates between both traditional and alternative approaches to supervision that can be considered most effective for staff development and teacher effectiveness. These include clinical supervision, developmental approach, collaborative development, self-directed or reflective development, portfolios, and professional growth plans. Administrative monitoring is included in the review, but cannot be considered as an option for teachers. Implementing of different models of supervisory practices is intended not only to give

choices to the teachers; it is also designed to provide choices to the administrators and schools [13].

## 8. Research Methodology

The purpose of the study was to examine high school teachers’ perceptions of actual approaches to supervision and their perceived connection to professional development. In this part, the research design, data collection process, and data analysis procedures are presented.

### 8.1. The Study Sample

The target population for this study included all high school teachers in Al Mafraq District in the north of Jordan, the sample (convenient sample) consisted of (51) teachers; 30 novice teachers and 21 experienced teachers.

### 8.2. Research Methods

In this research, data were collected through the use of survey. The general purpose of the survey is to collect data from participants about their characteristics, experiences, and opinions [11]. The questionnaire, developed by the researcher, was designed as a survey instrument to elicit teachers’ points of view and establish a profile of the supervision experiences of high school teachers in Jordan. The modifications and additions to the surveys were based on the review of the literature and the specific context of the study. The survey used in this study was organized into four sections. Section one included teacher’s demographic, personal, and contextual data. Section two sought data on teachers’ perceptions of actual supervisory approaches. With each question about various approaches to supervision, a definition of each supervisory practice was included. Section three focused on data related to teachers’ reactions to instructional supervision, and section four sought data on the connection of supervision and professional development. The respondents were asked to respond to questions on a five point Likert scale to indicate their level of agreement with each response.

In order to ensure the confidentiality and anonymity of the respondents the surveys were not coded. The survey was administered to all high school teachers attending a training program in integrating technology in education in Al Mafraq District. The survey was anonymous and all information was confidential.

**8.2.1. Validity and Reliability.** This study incorporated the procedures of content and concurrent validity. Content validity was based on the examination of the survey instrument by

educational professionals, advisory committee members, and participants of the pilot study. These individuals reviewed the instrument, commented on its appropriateness, and made recommendations for change. Their recommendations and suggestions were taken into consideration, and some modifications were made.

The reliability of the survey instrument was confirmed by examining the individual test items using the Cronbach's alpha [11]. Cronbach's alphas indicated that the estimates for the internal consistency of the collected data were considered acceptable for the research.

**8.2.2. Data Analysis.** Data analysis was performed using SPSS computer software packages. Analysis of the data included frequency counts, means, standard deviations, and percentages to summarize items in the survey. Correlations and one-way analyses of variance (ANOVA) were used to determine statistical significance [4].

The data were presented according to the research questions of the study. For each question, quantitative data were first described in table form, following which, a presentation of qualitative data was provided.

## 9. Analysis of the Data

The purpose of the study was to examine high school Jordanian teachers' perceptions of actual approaches to supervision and their perceived connection to professional development.

The following questions served as a guide in this research:

1. What are the perceptions of Jordanian high school teachers regarding the supervision process?
2. What are the perceptions of Jordanian high school teachers regarding the actual supervisory practices?
3. What are the perceptions of Jordanian high school teachers regarding the relationship between actual supervisory practices and professional development?
4. Are there any statistically significant differences in the perceptions of Jordanian high school teachers regarding: the supervision process, actual supervisory practices and the relationship between actual supervisory practices and professional development that might be attributed to their experience: experienced / novice?

In order to pursue the teachers' perceptions of the supervision process, means and standard deviations were calculated, respondents' perceptions of their satisfaction with supervision process are shown in Table 1.

Commenting upon the issues of satisfaction, most respondents expressed medium or low levels of overall satisfaction with the type of supervision they received. Only the importance of supervision was highly scored by the novice teachers.

In order to pursue the teachers' perceptions of actual supervisory practices, means and standard deviations were calculated, respondents' perceptions of actual supervisory practices are shown in Table 2.

This section discusses the respondents' perceptions of actual frequency of the use of selected supervisory approaches, namely clinical supervision, peer coaching, cognitive coaching, mentoring, reflective coaching or self-directed development, portfolios, and professional growth plans. Mean scores and standard deviations were calculated for the experienced and novice teachers participating in the study. The highest scored approach is the clinical supervision, while other approaches were scored as low occurrences.

Regarding the teachers' perceptions of the relationship between actual supervisory practices and professional development, Pearson correlations were calculated, respondents' perceptions of the relationship between actual supervisory practices and professional development are shown in Table 3. As it can be seen in Table 3, all the correlations were not statistically significant which refers to the teachers' perceptions that no relationship between actual supervisory practices and professional development.

In order to see if there are any statistically significant differences in the perceptions of Jordanian high school teachers regarding: the supervision process, actual supervisory practices and the relationship between actual supervisory practices and professional development that might be attributed to their experience: experienced / novice, means and standard deviations were calculated, respondents' perceptions of supervisory process, actual supervisory practices and the relationship between supervisory approaches and professional development are shown in Table 4.

**Table 1. Respondents' Perceptions of their Satisfaction with Supervision Process**

Perception	Experienced Teachers		Novice Teachers	
	Mean	SD	Mean	SD
I perceive supervision to be important.	2.9524	1.43095	4.1000	.99481
I am satisfied with the <i>amount</i> of supervision being provided in my school.	3.8095	1.36452	2.9667	1.18855
I am satisfied with the <i>quality</i> of supervision being provided in my school.	3.0000	1.34164	2.8333	1.14721
The supervision meets my individual professional needs.	2.7143	1.48805	4.1333	1.10589
The school policies allow me to choose my type of supervision.	2.2381	1.04426	2.4667	1.13664

**Table 2. Respondents' Perceptions of actual supervisory practices**

Supervisory Practice	Experienced Teachers		Novice Teachers	
	Mean	SD	Mean	SD
Clinical supervision	4.2857	.64365	4.0667	.90719
Peer coaching	1.9048	.88909	2.5333	1.16658
Cognitive coaching	1.6190	.80475	1.6333	.76489
Mentoring	1.7619	.76842	1.9333	1.08066
Self-directed development (reflective coaching)	1.3333	.57735	1.4333	.72793
Portfolios	1.9048	1.04426	1.9667	1.18855
Professional growth plans	1.4286	.74642	1.4333	.67891

**Table 3. Respondents' Perceptions of the relationship between actual supervisory practices and professional development**

Supervisory Practice	Experienced Teachers		Novice Teachers	
	Pearson	<i>P</i>	Pearson	<i>P</i>
Clinical supervision	-.107	.643	-.275	.142
Peer coaching	.121	.603	.235	.212
Cognitive coaching	-.382	.087	.057	.765
Mentoring	-.130	.573	-.015	.937
Self-directed development (reflective coaching)	.024	.917	-.341	.065
Portfolios	.203	.377	.310	.096
Professional growth plans	.242	.291	-.285	.127

**Table 4. Respondents' perceptions of supervisory process, actual supervisory practices and the relationship between supervisory approaches and professional development**

Supervisory Practice	Experienced Teachers		Novice Teachers	
	Mean	SD	Mean	SD
Perception of supervisory process	14.7143	3.39327	16.5000	2.72599
Clinical supervision	4.2857	.64365	4.0667	.90719
Peer coaching	1.9048	.88909	2.5333	1.16658
Cognitive coaching	1.6190	.80475	1.6333	.76489
Mentoring	1.7619	.76842	1.9333	1.08066
Self-directed development (reflective coaching)	1.3333	.57735	1.4333	.72793
Portfolios	1.9048	1.04426	1.9667	1.18855
Professional growth plans	1.4286	.74642	1.4333	.67891
Perception of relationship between supervisory approaches and professional development	18.0476	2.37647	20.2667	3.11762

**Table 5. Results of One Way Analysis of Variance**

Variable	Source	Sum of Squares	df	Mean of squares	F	Sig.
Perception of supervisory process	Between	39.391	1	39.391	4.330	.043*
	Within	445.786	49	9.098		
	total	485.176	50			
Clinical supervision	Between	.593	1	.593	.903	.347
	Within	32.152	49	.656		
	total	32.745	50			
Peer coaching	Between	4.881	1	4.881	4.327	.043*
	Within	55.276	49	1.128		
	total	60.157	50			
Cognitive coaching	Between	.003	1	.003	.004	.949
	Within	29.919	49	.611		
	total	29.922	50			
Mentoring	Between	.363	1	.363	.389	.535
	Within	45.676	49	.932		
	total	46.039	50			
Self-directed development (reflective coaching)	Between	.124	1	.124	.275	.603
	Within	22.033	49	.450		
	total	22.157	50			
Portfolios	Between	.047	1	.047	.037	.848
	Within	62.776	49	1.281		
	total	62.824	50			
Professional growth plans	Between	.000	1	.000	.001	.981
	Within	24.510	49	.500		
	total	24.510	50			
Perception of relationship between supervisory approaches and professional development	Between	60.828	1	60.828	7.549	.008*
	Within	394.819	49	8.058		
	total	455.647	50			

\*  $p \leq 0.05$

There are apparent differences between means of perceptions of teachers regarding the supervisory process, supervisory approaches and the relationship between supervisory approaches and professional development. To check if these differences are statistically significant ones, the researcher used One Way Analysis of variance (ANOVA).

The Table 5 shows the one way analysis of variance results.

There are statistically significant differences in teachers' perceptions of supervisory process ( $F=4.33$ ,  $p = 0.043$ ), peer coaching approach ( $F= 4.327$ ,  $p = 0.043$ ) and their perceptions of relationship between supervisory approaches and professional development ( $F= 7.549$ ,  $p = 0.008$ ) that can be attributed to the teachers' experiences.

The Table 3 revealed that all the differences were in favor to the novice teachers compared to their experienced colleagues.

## 9. Discussion and Conclusions

The fact that most respondents expressed medium or low levels of overall satisfaction with the type of supervision they received refers to the current situation of supervision, and represents a call that supervision should be an informal and collaborative effort between teachers and supervisors. The teachers would like to see a more frequent use of the following approaches: reflective coaching, professional growth plans, peer coaching, and mentoring. Regarding the supervisory approaches, the results showed that the highest scored approach is the clinical supervision, while other approaches were scored as low occurrences. This result indicated that the collaborative supervisory practices are not as familiar as the clinical approach which is best known and wide practiced in the educational system in

Jordan. What makes this result expected is the fact that the supervision is still considered as a separate process from the school; the supervisors are belonging to a central department that is related to schools, which is not part of those schools. Besides that, the results refer to the teachers' perceptions that no relationship between actual supervisory practices and professional development. Although there is a high level of agreement with the statement that supervision contributed to the professional development of the teachers. However, results showed that there was a clear disconnection between the supervision they received and their professional development. Teachers expressed the view that supervisors did not always have the experience, knowledge, and ability to provide effective feedback and select professional development activities for teachers, the fact that stresses the evaluative roles of supervisors.

Novice teachers expressed the need for supervision more than their colleagues of the experienced teachers. This fact is consistent with what Beach and Reinhartz noted [3]; that teachers tend to favor individualized, close, and supportive supervision, which addresses their individual needs. Teachers have to play key role in deciding which approaches best address their needs at a given time [21]. However, through supervision, individual needs of a teacher have to be linked with organizational goals, so that individuals within the school could work in harmony toward their vision of what the school should be [15]. Goldhammer et al. emphasized that supervision should provide certain autonomy that enhances freedom for both the teacher and supervisor to express ideas and opinions about how the method of supervision should be implemented to best improve teaching [16]. It could be concluded that, in general, supervision does not

meet the Jordanian teachers' individual professional needs.

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# The Relationship between Science Questions, Levels of Perceived Confidence and Science Answers: Patterns in Data Collected through an Interactive Response System

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## Abstract

*We are interested in reporting on whether there is a pattern between the style and nature of questions and the degree of perceived confidence in, and the science answers provided by, 300 adult participant responses. It is not our intention to revisit the misconception literature, nor are we, in this instance, interested in determining whether our participants have a strong or weak understanding of science. Instead we are interested in exploring literacy (science, language, technology and mathematical literacy) demands made by the questions and we are interested in determining whether these demands had any influence on participant perceived confidence or science answer. This paper will describe the methodology used and present some of the findings in terms of the patterns observed thus far. Our study suggests that if the questions posed favour a particular reasoning skill, i.e. recall, rather than comprehension, then perhaps pupils' performance will be enhanced if their teaching and learning environment promotes pedagogy that supports recall rather than comprehension.*

## 1. Introduction

The Alexander Primary Review suggest that the best primary education maintains a balance between developing essential skills and promoting activities that encourage child's creativity and personal development in order to develop their self esteem, confidence and basic skills [1]. There is strong evidence which suggests that a significant proportion of primary teachers lack confidence in their ability to teach science. There is also a body of research suggesting that science debates within society range from issues on genetically modified foods and nuclear energy to biometric identification, but that some of these debates are informed and fuelled by misconceptions. This may be because people, (children and adults) have misconceptions about basic science ideas. There is also evidence to suggest that perhaps some of these reported misconceptions are influenced by the nature of the question. Science often requires students to move between the

macroscopic, microscopic and symbolic levels particular to science [3], and as Han and Roth, suggest, there are challenges to face when making sense of microscopic, macroscopic and symbolic science [4]. In addition, the manner in which questions are posed may also influence the response, for example, Russell, Lucas and McRobbie suggested that pupils' initial understandings of thermal physics were mediated in multiple ways by the screen display [5]. We would suggest that science questions also warrant a degree of (language) literacy and in some cases mathematical literacy.

## 2. Literature Review

Interactive response systems (IRS) have become more sophisticated over the last 4 decades and are being used more frequently and integrated more effectively in learning environments [6]. Gauci Dantas, Williams and Kemm [7] highlight the advantages posed in engaging the whole of a class group and being able to poll and receive answers or opinions from all participants, not merely the most vocal. However, some indications have been found that occasionally students have found difficulty in using hand held devices [8]. Kay and LeSage [9] highlight how IRS are used to give both instructors and students feedback on how well concepts are being understood. As such IRS are effective as formative assessment tools and can provide a record of this assessment process. Assessment in science education has shown that many of us have misconceptions about basic science ideas [10]. In this paper we suggest that responses, in some cases documented as misconceptions are a consequence of the language used in the questions posed.

## 3. Methodology

Recently we adopted an approach to exploring we adopted an approach to exploring adults', (aged between 17 and 50), perceived confidence in answering science questions and compared it to their level of attainment and the nature of the questions being asked. We relied on convenience sampling and adopted an approach that involved using questions based around the 2003 Scottish Survey of



Achievement. Data was collected by using a commercially available interactive response system. Comparison was made between the nature of the question, perceptions of confidence, science qualifications and their responses. The responses from the adult cohort were made available to a team of researchers and this paper provides some insight into the patterns observed with respect to the nature of the questions posed, the respondents' answers and their perception of their confidence in the accuracy and appropriateness of their answer. In terms of process the adults used the interactive response system during part of a lecture and were asked to press a button to indicate their response to the question observed on screen. These responses were logged by the system. The data generated, in terms of cohort responses were shared with the cohort at the time, and their responses were discussed. We also opted to use a complementary accounts methodology and having rendered the data anonymous, we shared the data with the science mathematics and ICT (SMICT) research group [2]. Members of that group have chosen to report on an element of analysis at this conference. The SMICT group comprise of science, mathematics and computing educators all of whom use ICT in their teaching and research practice. The data presented in this paper is analysed through their different windows and as such provides an opportunity to identify patterns between the nature of the questions, the level of perceived confidence and the accuracy of science responses.

#### 4. Analysis of Findings

It is not our intention to revisit the misconception literature, nor are we interested in determining whether the adult cohort have a strong or weak understanding of science. Instead we are interested in reporting on whether there was a pattern between the style and nature of questions and the degree of perceived confidence and adult cohort science answers. We are interested in the exploring the literacy (science, language, technology and mathematics) demands made by the questions and we are interested in determining whether these demands had any influence on perceived confidence or science answer. Data analysis is currently in progress, and the paper presented at the conference will describe the methodology used and present some of the findings in terms of the patterns observed thus far.

#### 5. Conclusion

The findings based, on this convenience sample of 300 adults suggests scope for further study, with particular regard to international studies comparing learner performances. We accept that all learners

participating in an international study will face the same question. However if the questions posed favour a particular style, ie recall, rather than comprehension, then perhaps particular cohorts of learners will be favoured if their teaching and learning environment favours pedagogy that supports recall rather than comprehension. Furthermore, this may not be testing their understanding of the science.

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# An Assessment of Predisposing Factors to Peer Victimization among Secondary School Students: Implications for Counselling

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## Abstract

*This study presents the assessment of predisposing factors to peer victimization among secondary school students. Survey research design was adopted. The study participants were one thousand five hundred junior secondary school students randomly drawn from 10 secondary schools in Osun State. Validated Multidimensional Peer Victimization Scale (MPVS) was used to collect data for this study. Inferential statistics of chi-square was used to analyze the data. The result showed that parental occupation, living with parent(s), family type, parental qualification, parental income and student's academic performance were predisposing factors to peer victimization. The study therefore concluded that rather than viewing peer victimization as a normal aspect of childhood growth and development. It has been shown that it is indeed a form of violent behavior with far reaching implications for the child, school and society and could be reduced through appropriate counselling of students.*

## 1. Introduction

Peer victimization is an important social issue that negatively affects a large number of students in schools. Not only does it cause harm and distress to the students who are bullied [2, 13, 17], it also inflicts emotional and developmental scars that can persist into adolescence and beyond [8, 15]. Peer victimization also known as bullying in the literature of educational research is a social issue which has received considerable attention from researchers and educators in many parts of the world [16]. It is widely regarded as a serious personal, social and educational problem which affects a substantial portion of school children but in Nigeria until recently, the common perception had been that peer victimization was a normal part of childhood experience which they must learn to tolerate as part of the process of growing up. Recently, in Nigeria, some researchers have extensively documented that peer victimization has been a major source of psychological problems and great impediment to effective teaching and learning and potentially damaging form of violence among children and youth. Morrison stated that peer victimization can

have negative consequences for the general school climate and for the rights of students to learn in a safe environment without fear [10]. Not only does it harm both its intended victims and the perpetrators, it also may affect the climate of schools and indirectly the ability of all students to learn to the best of their abilities.

Peer victimization has attracted the attention of researchers worldwide though studies on it are more outside the shore of Nigeria. Peer victimization is viewed in relation to aggressive behaviour and differential power relations. It has various definitions. According to Hawker, peer victimization can be defined as the experience among children of being a target of aggressive behavior of other children, who are not siblings and not necessarily age mates [7]. The act was described as an unprovoked attack that causes hurt of a psychological, social or physical nature [18]. Olweus also described peer victimization as a problem that occurs when a student is exposed repeatedly and overtime to negative actions on the part of one or more other students [14]. Peer is known to be one of the major causes of student's poor academic achievement, social problems and internalizing problems such as depression, anxiety and poor psycho-social adjustment. Craig reported that all forms of physical, verbal and social symptoms were predictive of victim anxiety. Its forms changes with age [3]. According to Lumsden bullying occurs when a person willfully and repeatedly exercises power over another with hostile or malicious intent [9]. The term "bullying" encompasses a wide range of physical or verbal behaviours of an aggressive or antisocial nature. These include insulting, teasing, abusing verbally and physically, threatening, humiliating, harassing and mobbing.

However, peer victimization could be as repeated oppression, either physical or psychological of a less powerful person by a more powerful person or group. In the studies of peer victimization, the most commonly reported form was verbal abuse and harassment followed by nasty comments about physical appearance and social victimization. Social victimization, a more subtle form of isolation resulting from the exclusion of children from peer friendship groups, was found to be perhaps the most intimidating [14]. Peer victimization consists of direct and indirect behaviours. Direct behaviours

such as teasing, taunting, threatening, hitting and stealing are carried out by one or more students against a victim, while indirect behaviour is for example socially isolating or alienating intentionally a student. Whether through direct or indirect behaviour, the key components of victimization include physical and or psychological intimidation by a powerful individual repeatedly overtime, creating a sustained pattern of harassment and abuse. It has been observed by Olweus, that bullying is a serious problem for school age children and for which they receive limited adult help [14]. It has effects on a large number of school children, for example, inability to get just emotional by victims of bullying impact negatively on children's ability to learn in school. It was discovered that the characteristics of bullying make it almost an invisible act in a way that adults are unaware of the problems. The problem is then compounded by the reluctance of most students to report the problem. In addition, there are certain misconceptions about bullying, for example, it is believed that the victims will grow out of it and that boys will always be boys. In either case, the public ignores the problem and its impacts become more devastating to the victims. Bullies tend to experience inconsistent authoritarian parenting styles and exhibit impulsive tendencies. Identification of predisposing factors in the home and environment (e.g., school climate) can lead to timely identification of at-risk children and provide the basis for intervention.

Also, Doll et al. asserted that bullying is a distinct form of malicious behaviour that usually involves an imbalance of power relations [5]. These behaviours range from ostracizing to physical attack. Children and adolescents who are victimized experience anxiety, depression and low self-esteem. They often avoid school for the sole purpose of avoiding situations where they can be victimized. However, some students may be predisposed to peer victimization as a result of instability in parent's marriage, socio-economic factor, living or not living with parent(s) and poor academic performance among others [1, 3, 4, 6, 12]. In order to confront the problem of peer victimization in schools effectively, these factors deserve further examination. The combined effects of these experiences interfere with the victims' social, academic and emotional development. It is a persistent problem in Nigeria's education system which affects the ability of the students to learn and it reduces the effectiveness of the teachers. As long as these problems persist in the school system, the major purpose of schooling, that is learning is defeated, based on these.

The purpose of this study is to examine the predisposing factors to peer victimization among secondary school students.

## 2. Method

Survey research design was adopted for this study. The population for the study consisted of all the secondary school students. The sample consisted of 1500 students selected by stratified random sampling technique using class level (junior secondary school 1-111) as strata. Fifty students were randomly selected in each junior secondary school, hence a total of 150 students from each of the selected secondary schools. The adapted version of the Multidimensional Peer Victimization Scale was used to collect data for this study. Section A of this scale was used, it consisted of the demographic characteristics of the students and the items on the factors that could predispose students to peer victimization and inferential statistics of chi-square was used to analyze the data.

## 3. Analysis of Data

To examine the predisposing factors to peer victimization, the data collected from administration of Multidimensional Peer Victimization Scale was subjected to inferential statistics of chi-square.

In this study, an attempt was made to examine factors that predispose or make a student prone to victimization. In doing this, students' response to section B part II of the Multidimensional peer victimization scale was scored with the minimum and maximum obtainable of 0 and 40 respectively. Students with score that ranges between 0 and 10 are grouped not victimized, those whose score ranges between 11 and 20 were grouped occasionally victimized and respondents with scores that ranges between 21 and 40 were grouped frequently victimized. The relationship between students' demographic characteristics (father's occupation, mother's occupation, father highest qualification, mother highest qualification, living with parents, type of family) and victimization groupings were determined to establish whether the demographic characteristics were predisposing factors to peer victimization among secondary school students or not. Tables 1a to 1f present the results of the demographic characteristics as predisposing factors to peer victimization. From Table 1a, the fathers of 93 of the respondents were traders, twenty three of these students (24.7%) indicated that in the last one year they have not been victimized, while forty four of (47.3%) and twenty six (28.0%) of them have been occasionally and frequently victimized respectively. In addition, out of the 49 whose fathers are medical personnel, 20.4% and 12.2% respectively reported that they have been occasionally and frequently victimized.

**Table 1a: Relationship between Father’s Occupation and Child Predisposition to Peer Victimization**

Father's Occupation	Student Susceptibility to Peer Victimization			$\chi^2$	Df	P
	Not Victimized	Occasionally Victimized	Frequently Victimized			
	Observed	Observed	Observed			
Trading	23 (24.7%)	44 (47.3%)	26 (28.0%)	176.9	16	<.05
Medical Practitioner	33 (67.3%)	10 (20.4%)	6 (12.2%)			
Security Personnel	57 (74. %)	14 (18.2%)	6 (7.8%)			
Teaching	127 (67.9%)	40 (21.4%)	20 (10.7%)			
Civil Servant	62 (36.3%)	54 (31.6%)	55 (32.2%)			
Artisan	28 (17.6%)	64 (40.3%)	67 (42.1%)			
Farming	240 (41.9%)	175 (30.5%)	158 (27.6%)			
Clergy	44 (66.7%)	10 (15.2%)	12 (18.2%)			
Others	28 (63.6%)	11 (25.0%)	5 (11.4%)			

Furthermore, 21.4% and 10.7% of the students whose fathers were teachers reported that in the last one year, they have been occasionally and frequently victimized respectively. It was also, revealed in the Table 1a that of the 573 students whose fathers were farmers 41.9%, reported that in the last one year the have not experienced any form of victimization, while 30.5% had occasionally been victimized and 27.6% frequently victimized. Students whose fathers are security personnel were the least predisposed to peer victimization with 74% of them reporting not to have been victimized in the last one year.

Table 1a yielded a chi-square value of ( $\chi^2 = 260.8$ ) which is significant at .05 level, thus there is a significant relationship between father’s occupation and child predisposition to peer victimization indicating that father’s occupation is a predisposing factor to child susceptibility to peer victimization.

To assess the relationship between father’s highest educational qualification and child predisposition to peer victimization, highest

educational qualifications was used in this study to mean highest school attended and completed. As a result we, have the following groupings “No formal education, primary education, secondary education and tertiary education.

From Table 1b, the fathers of 243 of the respondents had no formal education, 56.4% of these were occasionally victimized in the last one year, while 27.2% were frequently victimized indicating that over 80% of the 243 had experienced pains and being hurt by fellow students without offending them in the last one year. Furthermore, out of the 285 whose fathers had a complete primary education, 34.0% reported that they were not victimized, while a total of 66% had been occasionally or frequently victimized in the last one year. Table 1b, also revealed that while 52.1% of students whose fathers had a complete secondary school reported not to have been victimized, 67.9% of those whose father had a complete tertiary institution education, reported that they did not experience victimization from peers.

**Table 1b. Relationship between Father's Qualification and Child Predisposition to Peer Victimization**

Father's Highest Educational Qualification	Student Susceptibility to Peer Victimization			$\chi^2$	Df	P
	Not Victimized	Occasionally Victimized	Frequently Victimized			
	observed	Observed	Observed			
No formal education	40 (16.5%)	137 (56.4%)	66 (27.2%)	200.2	6	<.05
Primary Education	97 (34.0%)	111 (38.9%)	77 (27.0%)			
Secondary Education	258 (52.1%)	110 (22.2%)	127 (25.7%)			
Tertiary Education	235 (67.9%)	70 (20.2%)	41 (11.8%)			

The chi-square analysis in Table 1b gives ( $\chi^2 = 200.2$ ) which is significant at .05 confidence levels thus revealing that relationship between father's education and child predisposition to peer victimization is significant, that is, father's education to a significant level determines child predisposition to peer victimization. Table 1c presents the relationship between mother's occupation and child predisposition to peer victimization.

From Table 1c, of the 508 students whose mothers were traders, a total of 81.5% reported that they have been occasionally or frequently victimized by fellow students. More so, while 23.6%, 23.7% and 21.9 of students whose mothers were , artisans, farmers and full house wives respectively indicated that they have not experienced peer victimization in the last one year, 55.1%, 64.5% and 48.4% of students whose mothers were teacher reported not to have been victimized by their peers in the last one year.

Table 1c revealed a statistically significant chi-square value ( $\chi^2 = 195.7$ ), indicating that mothers' occupation bears a significant relationship with child predisposition to peer victimization. Mothers' occupation to a significant level is a predisposing factor to peer victimization among secondary school students.

From Table 1d, while only 32.9% of the student whose mothers had no formal education had been victimized by their peers, while 50%, 67.7% and 75% of those whose mothers respectively completed primary education, secondary education and tertiary education reported not have been victimized by their peers. The chi-square value ( $\chi^2 = 150.1$ ) which is again significant at .05 level of significance depicts the fact that mothers' education may be a factor to a child's predisposition to peer victimization. The

relationship between living with parents and child predisposition to peer victimization was also determined and it is as presented in Table 1e.

Table 1e revealed that while 67% of students who live with their parents reported not having been victimized by their fellow students, only 36.7% of those who do not live with their parents indicated not having been victimized. Furthermore, it was also revealed in the Table that there is significant relationship between living with parents and child predisposition to peer victimization. This is as a result of the chi- square value ( $\chi^2 = 129.05$ ) that was obtained. It could therefore be concluded that living with parents to certain extent may be a predisposing factor to peer victimization. Lastly, attempt was made to find out the relationship between family type and child predisposition to peer victimization.

Table 1f presented the result. Table 1f revealed that while 48.4% of students who were from polygamous family reported not having been victimized by their fellow students, 58.1% of those who were from monogamous family indicated not having been victimized. Furthermore, it was also revealed in the Table that there is significant relationship between living with parents and child predisposition to peer victimization. This is as a result of the chi- square value ( $\chi^2 = 13.4$ ) that was obtained. It could therefore be concluded that there is a significant relationship between family type and child's predisposition to peer victimization.

**Table 1c. Relationship between Mother's Occupation and Child Predisposition to Peer Victimization**

Mother's Occupation	Student Susceptibility to Peer Victimization			$\chi^2$	Df	P
	Not Victimized	Occasionally Victimized	Frequently Victimized			
	Observed	Observed	Observed			
Trading	94 (18.5)	77 (34.8)	237 (46.7)	195.7	12	<.05
Medical Practitioner	38 (55.1)	14 (20.3)	17 (24.6)			
Teaching	138 (64.5)	35 (16.4)	41 (19.2)			
Artisan	33 (23.6)	49 (35.0)	58 (41.4)			
Farming	23 (23.7)	35 (36.1)	39 (40.2)			
Civil Servant	45 (48.4)	28 (30.1)	20 (21.5)			
Full House Wife	35 (21.9)	50 (31.3)	75 (46.9)			

*\*The figures in parenthesis are the percentages*

**Table 1d. Relationship between Mother's Qualification and Child Predisposition to Peer Victimization**

Mother's Highest Educational Qualification	Student Susceptibility to Peer Victimization			$\chi^2$	Df	P
	Not Victimized	Occasionally Victimized	Frequently Victimized			
	Observed	Observed	Observed			
No formal education	156 (32.9%)	140 (29.5%)	178 (37.6%)	150.1	6	<.05
Primary Education	120 (50%)	50 (20.8%)	70 (29.2%)			
Secondary Education	225 (67.7%)	57 (17.2%)	50 (15.1%)			
Tertiary Education	150 (75.0)	30 (15.0%)	20 (10.0%)			

**Table 1e. Relationship between Living with Parents and Child Predisposition to Peer Victimization**

Living with parents	Student susceptibility to Peer Victimization			$\chi^2$	df	P
	Not Victimized	Occasionally Victimized	Frequently Victimized			
	observed	Observed	Observed			
Yes	600 (67%)	170 (19.1%)	12 (13.9%)	129.05	2	<.05
No	180 (36.7)	140 (28.6)	170 (34.7)			

*\*The figures in parenthesis are the percentages*

**Table 1f. Relationship between Family Type and Child Predisposition to Peer Victimization**

Family Type	Student Susceptibility to peer victimization			$\chi^2$	df	P
	Not Victimized	Occasionally Victimized	Frequently Victimized			
	Observed	Observed	Observed			
Polygamous	295 (48.4)	185 (30.3)	130 (21.3)	13.4	2	<.05
Monogamous	482 (58.1)	208 (25.1)	140 (16.9)			

*\*The figures in parenthesis are the percentages*

#### 4. Findings

The result of the findings revealed that there is a significant relationship between father's occupation, mother's and father's highest educational qualification and child predisposition to peer victimization. This implies that parental occupation and qualification can make the students be predisposed to peer victimization. Students whose parents do not have good qualification and occupation may find it difficult to relate with others whose parents are well educated, inferiority complex can make the affected students not fit in to other students' group. Therefore, socio-economic factors inevitably predispose students to peer victimization [11, 19, 20, 18]. Furthermore, it was also revealed that there was a significant relationship between living with parents and child predisposition to peer victimization. It could therefore be concluded that living with parents to a certain extent may be a predisposing factor to peer victimization and this may be due to the kind of parenting style introduced to the children by their parents. Also, it would therefore be concluded that living with both parents and one to certain extent is a predisposing factor to peer victimization. Then, having a father that has more than one wife has a significant difference with child predisposition to peer victimization. A student with an abusive parent may be predispose to victimization because of the kind of life style he/she had been exposed to especially if the is too strict on the child, then a student with a father that has more than one wife may be predisposed to peer victimization because of the he/she is being treated by the wives thus subjecting him/her to be a victim of peer victimization.

Each of these factors or a combination can predispose students to peer victimization. Parental qualification, occupation for example can predispose students to peer victimization. Students whose parents are illiterate or not having a good job may find it difficult to relate with others whose parents are educated or having a good job. Inferiority

complex is likely to set in and there is possibility of victimizing assumed inferior students. Therefore, socio-economic factors can inevitably contribute to the prevalence of peer victimization. Also, poor academic performance can predispose students to victimization. Students that could not perform academically well may be ignored or neglected by other students seeing him/her as not belong to their group. The victimized students could be depressed, fearful of coming to school and this may lead to truancy.

#### 5. Implications for Counselling

Shortage of qualified counselors in schools will not allow the perpetrators and the victims to have the opportunity of being counseled on the problem of victimization. There is also need for sufficient funds to establish and equip Counselling Units in secondary schools and provide counselling facilities in the school to render effective counselling services. In a clear recognition of the critical value of counselling services and shortage of qualified counselors in the secondary school the National Policy on Education states that:

In view of the apparent ignorance of many young people about career prospects and in view of personality maladjustment among school children counselors shall be appointed in post-primary institutions -- qualified personnel in this category are scarce [21].

The acute shortage of such qualified counselors in the secondary schools and scarcity of such Units is itself a key factor in promoting victimization related violence among secondary school children. These factors in addition to the shortage of funds and lack of encouragement from the school authority seem to compound the problems of providing quality counselling services in the secondary schools. In order to intervene positively and eradicate the different forms and high prevalence of peer victimization in secondary school, State governments should be encouraged to implement the provision of the section ii (j) by establishing /restoring

counselling services and employing qualified counselors to provide quality counselling services [18].

Also, schools should investigate and understand more of the factors in the home and school environments which promote peer victimization in schools. It is necessary to understand different patterns of child rearing and their possible impacts on peer victimization. Such an understanding will suggest the most effective means of intervention. It has been shown for example that frequent whipping may arouse violent behavior from the child an aggressive awareness and sensitization campaign should also be undertaken by state Ministries of Education through available counselling units and relevant Non- Governmental Organization to highlight the negative impacts of peer victimization among students. Under the awareness campaign, victims of peer victimization should be encouraged to report all cases of actual and potential victimization to appropriate school authorities. There is no doubt the urgent need to begin to re-emphasize the educational and moral values of counselling services and the training of counselors focusing on the increasing ramifications and potential negative impacts of peer victimization. Terrorism and related forms of violence may in fact be rooted in the inability of counsellor to adequately curtail the different forms of peer victimization at secondary school level.

## 6. Contribution to knowledge

The study raises awareness of counselors, parents, teachers and other stakeholders on the existing and growing impact of in the secondary schools and now refocused to the problems of peer victimization in school, this constitute an important contribution to knowledge.

The research instruments specially designed for the study is an important contribution in this study because it will be available for other researchers investigating related study of peer victimization. Also, the results of the study not only serve as framework for further investigation, but as a point of departure in contemporary discourse of peer victimization in Nigeria. It was concluded that the factors predisposing the students to peer victimization are issues and problems for both the schools and the counselors to resolve. The successful resolution of such issues depends on the dedication of researches and their determination to further the boundaries of knowledge on the matter.

## 7. Suggestions for further studies

It is suggested that research efforts should focus on identifying more psychological and socio-economic factors of peer victimization. The coverage

and scope of the study should be expanded to include a wide range of students from mixed demographic composition. Longitudinal studies of children from authoritarian and permissive family background should be carried out to determine the effect of two contrasting styles of child rearing on later aggressive behaviours in schools.

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## **Session 28:      Teacher Education, Education Policy and Leadership**

Joining the Goblins: Fictional Narratives and the Development of Student Teachers' Reflection on Practice in the Post-Compulsory Education Sector  
(Susan Wallace)

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# Joining the Goblins: Fictional Narratives and the Development of Student Teachers' Reflection on Practice in the Post-Compulsory Education Sector

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## Abstract

*This paper presents current research designed to explore whether student teachers in the postcompulsory sector are able to use fictionalised accounts of their own teaching practice experiences in order to gain a clearer understanding of their models and expectations of professionalism and of how they, as individuals, locate their current position within the profession as a community of practice. It argues that the translation of experience into fiction – in this case specifically in the form of fairy tales – can be usefully applied in order to enhance and encourage reflection on practice. Drawing on the evidence gathered, the paper goes on to suggest that student teachers' preoccupation at this stage of their development is not so much with meeting 'standards' of professionalism as with questions of belonging and acceptance; and with the need to transform their status, in relation to the profession, from that of outsider to insider.*

## 1. Introduction

In his autobiography, the poet, Edwin Muir, argues that there are two levels on which our life narrative or experiences can be recounted: the 'legend' and the 'fable' [1]. The legend, by Muir's definition, constitutes the verifiable facts of a life, a narrative consisting of dates and documented incidents, the telling of which is essential for 'the business of living'. The fable, on the other hand, does not confine itself to facts or even to conscious thought; but, for this very reason, better represents the inner 'truth' of our life's narrative than 'dry legend'. This is because our fable, unlike our legend, draws also upon imagination, dreams and metaphors, engagement with which can lead us to a clearer understanding of our own unexamined attitudes, assumptions and motives than the bare facts of our quotidian existence can provide. At first sight it may seem a questionable leap from the philosophical musings of an Orcadian poet to a consideration of the requirement that student teachers should reflect productively upon their experiences. Nevertheless, the argument presented by Winter, Buck and Sobiechowska [2], writing in the context of educational research and reflective practice, would

appear to support Muir's contention that 'dry legend' is of limited value in evaluating lived experience. Winter et al suggest that use of a purely factual approach 'reduces writers of autobiographies to mere providers of data'; whereas a process of reflection stimulated by means of creative narrative can enable writers of autobiographical accounts to become 'theorists of their own lives'. Muir's distinction between legend and fable, therefore, may suggest a means of moving the process of reflection on practice beyond the recounting of anecdotes and analysis of critical incidents towards a wider exploration of attitudes and expectations which may not otherwise have been fully understood or articulated. The discourse surrounding training standards for teachers in the Post-compulsory sector in the United Kingdom (UK) has emphasised the requirement for 'professionalism' and reflective practice as mandatory [3]. For the teacher educator, as well as for the student teacher, this requirement presents two major challenges. The first lies with the understanding of what we mean by professionalism, a concept which, as Bathmaker and Avis [3] point out, is an increasingly problematic one. The second arises from the task of equipping pre-service student teachers with the skills and motivation which will enable them to function effectively as reflective practitioners. This paper examines the expectations and experiences of 50 such student teachers during their pre-service training for the sector. It investigates the extent to which the use of fictional narrative serves to stimulate reflection on their initial experience; and draws some conclusions about where they situate themselves in terms of their professional identity.

## 2. Literature

The conscious and purposeful use of fictional and figurative narrative to identify or explore important issues of concern is well established in educational research (for example Clough [4]; Winter et al [2], and the value of using it in this way is not limited to the field of education nor indeed to any form of formal academic enquiry. Rorty [5] argues that all progress towards empathy and social justice – goals he refers to as 'human solidarity' – is best achieved not through direct, factual enquiry, but through imagination, suggesting, for example, that fictional

narratives such as the novel equip us with ‘the imaginative ability to see strange people as fellow sufferers’. Muir, as we have seen, values the tale or ‘fable’ for its potential to illuminate for us the truths about ourselves and our lives that might otherwise not be made conscious. Similarly, Winter et al [2] argue that,

‘the operation of the artistic imagination through the writing of fiction can be understood, precisely, as a mode of critical reflection upon, and reinterpretation of, experience.’

They explore, in particular, the way that fictional narratives can be analysed in order to identify the assumptions – for example, about matters of professional practice such as behaviour management or professionalism – which are embedded within it; assumptions perhaps not previously recognised or articulated consciously by the writer. They also point out that the purely autobiographical, unfictionalised account, such as that often required of student-teachers in the form of professional journals or logs, carries with it a risk of personal or emotional exposure which may discourage the student-teacher from exploring or even approaching painful episodes or contentious topics relating to their professional practice. ‘Stories’, on the other hand, provide a means of reporting that which might otherwise be withheld, even from oneself.

It has been pointed out (for example, by Bettelheim [6], that fairy tales may be read as extended metaphors. In this sense it could be argued that what the student-teachers were being asked to produce as part of this research was a metaphor of some aspect of their professional experience. According to and Johnson [7], metaphor can function as an indicator of how we construe the world, including our deeply held attitudes and assumptions which we may otherwise be unable to recognise, acknowledge or articulate. Previous research, for example, has focused upon metaphor use in an analysis of head teachers’ discourses about the relative status of vocational and academic qualifications [8]. Both these examples of research are predicated on the theory that an individual’s use of metaphor may provide insights into values and attitudes not otherwise expressed, and perhaps not previously consciously recognised or acknowledged.

The metaphors embedded in our language and culture, which in the context of fairy tales may include such components as the princess, hero, wicked witch, and so on, may be viewed as a part of our shared conceptual system, or *langue*. It is therefore likely that they will be relatively easy to ‘read’ or decrypt and that there will be a substantial degree of consensus about their interpretation. On an individual level, however, metaphor may also be located within *parole*; in other words, it may

represent an idiosyncratic image or linking of ideas which arises from, and provides some insight into, a personal, rather than cultural, set of constructs. In deconstructing their fairy tale narratives, the student-teachers were, in effect, engaging with both these levels of interpretation, the cultural and the personal.

### 3. Method and Methodology

The research was conducted with the participation of 50 student teachers who were attending a UK university as part of their pre-service teacher education programme following their second block of teaching practice experience in the post-compulsory sector. The purpose of the session was to encourage the student-teachers to review and reflect upon their recent experiences in college in order to identify and articulate their current attitudes and assumptions about the meaning of ‘professionalism’. In previous sessions of this kind, straightforward questioning had largely produced generalised answers which had appeared to conform self-consciously to the requirements of the National Standards; or, alternatively, to a critique of current practices evident among more experienced practitioners. With the aim of eliciting what Muir would call the ‘fable’, or personal significance, of their experience, the student teachers were asked to employ the genre of a fairy tale to write a short (250 words maximum) story inspired by their experience in their host college. They were given a time limit of 30 minutes for this part of the task, after which they were asked to organise themselves into groups of five and to read their completed tales to the other four members of the group. It was suggested that, following each reading, the groups should discuss with its author the significance or import of various aspects of the story in order to help him or her to reflect upon whether it provided any insight into their own attitudes, assumptions or practices. The way in which this final stage of the activity was conducted was of particular importance, not least for ethical reasons, as it was considered essential that each student-teacher maintained ownership of any interpretation given to their tale. The imposition of an interpretation by a third party, and particularly – because of the implicit power relationship - by the tutor, would not only raise issues about validity and authenticity but would also run counter to the purpose of the exercise, which was to encourage individual reflection on professional experience. Following the activity, individuals produced a brief written reflection on their own tale, identifying examples of where it had provided them with insights into any aspect of their beliefs or practices. They were asked to look at how they had chosen to represent their own character or point of view in the tale, and how they had depicted relationships, particularly power relationships, within the story. It

is from these reflections that, with the story writers' permission, the findings of this paper are drawn. The fairy tale genre was chosen for a number of reasons. Imposing the strictures and conventions of one specific genre provided the story tellers with a common structure and with points of comparison, as well as with a culturally non-specific template which would contain stock characters and archetypes which could be decoded with a degree of consensus.

The fairy tale was chosen over other genres which would have met many of the same criteria (the detective story, the science fiction tale or the romance, for example) because it offered the greatest opportunity to step as far away as possible from the self-consciousness of real life, and thereby provided most potential for imagination, metaphor and disguise. It also had the advantage of being universal and non gender specific.

It has been suggested, for example by Campbell [9], that qualitative research is, of necessity, grounded in biography. On its simplest level it tells stories about people. In this study the participants tell stories about themselves. The fact that these are fictionalised does not invalidate their biographical nature. Indeed, an advantage we might claim for the fictional narrative as research tool is that it provides a means of liberating the would-be reflective teacher from what Walker [10] describes as the "polite fictions" which teachers may create in the ostensibly factual accounts of their practice as a result of the need to provide coherent narratives of what is in fact a complex and often fragmented process of teaching and learning. It could even be argued from this that the straightforward fictional approach may have the potential to provide a more honest account, albeit in encrypted form, than a sanitized, simplified 'factual' one which the writer knows will be open to scrutiny by tutors, mentors and examiners. Convery [11], discussing the use of

fictionalised accounts as part of action research in the post-compulsory sector, points out that although the fiction is contrived, his personal responses and realisation are not. This is an essential point because it emphasises the purpose of the fictional narrative as being to provide the writer with a means of contemplating and reviewing aspects of their own professional practice, and particularly any hitherto unrecognised values and assumptions which the narrative may have made explicit. This purpose informed the structure of the research process under discussion here, and made it essential that it was the student-teachers themselves who should analyse, 'decode', reflect and report back on their own stories.

## 4. Findings

Although briefed to draw on any aspect of their professional experience in creating their fairy tales, a

significant majority (44/50) of the student-teachers chose as the theme of their story encounters with uncooperative or disruptive learners, variously represented by goblins, trolls, elves and so on. Of the remaining 6 student-teachers, 4 based the plot of their narrative on conflicts with their subject mentor (who, in all these cases, was an experienced teacher at their host college), and 2 with the entire staff or organization of the host college where their teaching practice took place. The universal emphasis on conflict in these stories cannot be treated in itself as significant, since it could be ascribed to the fairy tale format and the template it imposes, traditionally taking the form of a conflict of some kind which is resolved, usually by good prevailing over evil. What may be significant in these student-teachers' versions, however, is the *means* by which a resolution is reached, and also the ubiquitous emphasis on the need to manage *challenging behaviour*, usually that of students, but occasionally also of mentors, experienced teachers and management. The findings are organised here under a series of headings which summarise these and other key themes emerging from the student-teachers' stories.

### 4.1. Resolution or revenge?

In the majority (35/44) of stories which focused on student behaviour, a resolution was reached in which order was restored, often through 'magic' rather than any detailed strategy. In 9 of the stories, however, the establishment of order and compliance appeared not to be sufficient to satisfy the narrator's outraged sensibilities. In these cases revenge of various kinds was taken, usually by magical means and usually of a mild nature; for example, non-compliant students being outrageously overcharged for some fashion accessories by a witch in disguise. In two of the stories, however, revenge took a fairly drastic form, involving death by beheading and burial alive. As one of the student-teachers wrote in his commentary: 'I think I may be more fed up with these students than I've been admitting. I think maybe sometimes I do hate them.'

The revenge tales certainly caused some hilarity in the small discussion groups. Several student-teachers – including those who had not themselves used their stories to exact such retribution – commented that it was helpful to be able to talk about feelings of resentment towards disruptive students which they would otherwise have hesitated to express; but that using a fairy tale to do so was:

'like watching violence in a cartoon. You know you wouldn't ever condone this stuff in real life.'

#### 4.2. Are the students goodies or baddies?

Although the majority (44/50) of stories focused on some aspect of non-compliance on the part of students, they did not all present students as out and out villains. Indeed, in the majority of the tales the students are represented by elves, fairies, or pixies. These may be described as 'lively' or 'mischievous', but the names given to individuals, such as 'Fidget' or 'Dozy' suggests that the misbehaviour in question was fairly mild. In their commentaries some student teachers reflected on this with obvious interest, one writing, for example,

'It makes it sound like I'm kind of fond of them or like I think there's something magic about them, that they could secretly do stuff if they wanted.'

Another commented, 'I've made them sound cute. Why have I made them sound cute?'

In the remainder of the tales, however, the students are anything but 'cute', being described variously as 'ogres', 'trolls', 'frogs', 'dragons', 'monsters', 'hobgoblins', and 'goblins' [12]. Their behaviour is described as extreme, destructive and malicious:

'Of course, being trolls, the monsters could not be controlled and it wasn't long before they were swinging from the rafters and energetically bashing each other over the head with their clubs. Repeatedly the Apprentice called for order but every time it looked to be within reach another troll uttered a war cry and the violence would start again.'

The discussion this type of tale generated varied between the world-weary observation that, 'that's not a fairy tale. I recognise that. That's my Friday class'; and expressions of relief at hearing stories which symbolised their own experiences and fears. In this respect the discussions and commentaries supported the contention of Winter et al [2] that the fictionalising of difficult experiences can open them up for 'safe' and less inhibited discussion.

#### 4.3. Who has the power?

In the 35 stories which described a non-violent solution to difficulties with behaviour management, it was interesting to discover who emerged as possessing the power to solve the problem. Gratifyingly, in many of the tales [22] this was the student-teacher themselves, as in this example:

'Queen Titania paced forthright up to the bad fellow and encouraged him back into the throng. All the good fairies stood behind their queen and chanted their approval.'

In 13 of the stories, however, it was not the character representing the student-teacher themselves, but someone else who restored order, such as a witch, a queen, a knight, a unicorn, suddenly introduced for the purpose but identified in most commentaries with the student-teacher's mentor or some other experienced member of staff in their host college. Two such magical rescuers were identified as a university tutor. In one case the problem with student behaviour was so severe that even the mentor's intervention failed:

'On and on I tried but even after calling the Queen it was hopeless. Maybe my books were too old. Maybe I was afraid in case the dragons [students] set me on fire. My reflections will go on.'

These references to outside help suggest the student-teachers were feeling some degree of disempowerment or failure of confidence at this stage (about half way through) of their teaching practice experience; and indeed this was the interpretation which emerged in most of the commentaries. Again, the participants expressed relief at being able to acknowledge and discuss a continuing sense of dependency and to recognise that they were not the only ones.

What was most interesting about many of these tales involving third party interventions, however, was the degree of resentment implicit in the narrative, and a clear sense of the student-teacher feeling to some extent undermined by this 'help'.

'At this moment Prince Charming came charging through on his great white steed, brandishing his sword. "You see, my dear," he said to the Princess with a grin, "that's how it's done."'

These incidents in the stories opened up discussion in the small groups and in the commentaries about relationships with mentors, the parameters of role and expectations, and the differences between effective and toxic mentoring.

#### 4.4. Professionalism, belonging and acceptance

In almost all the tales, even those involving dependency or undermining, the narrator or protagonist remains clearly cast in the role of teacher, in the sense of finding themselves responsible for teaching a class of students and expected to demonstrate the attendant requirements of classroom management skills, appropriate subject knowledge and reasonable language and behaviour.

It is possible to read this as an embryonic model of professionalism – a set of parameters in terms of expectations and behaviours. This almost always involves a question of differentiated status between student-teacher and students, but also between student-teacher and mentor or other experienced colleagues; so that these narrators inhabit a kind of no-man’s land in which a greater or lesser degree of vestigial dependency excludes them, in their perception at least, from full professional status, though not from the requirement for professional behaviour and standards. An interesting illustration of this is the story of the ‘Apprentice’, from which we have already seen an excerpt. Here the student-teacher presents himself as clearly differentiated from the students he teaches, who take the form of ‘trolls’; and yet he himself is only a ‘Scribe’s apprentice’ whose inexperience ultimately necessitates the calling in of a knight to subdue the trolls, who have now degenerated into ‘a horde of vile beasts.’ In his commentary this student-teacher reflects on the status and role he has attributed to himself, and writes:

‘In my head the Apprentice was once just one of the trolls. He’s got the opportunity to better himself by getting apprenticed to the Scribe. But if he can’t hack it he’ll be back with the trolls again.’

An issue he does not address, however, is why it is not the Scribe to whom he is apprenticed, but rather a Knight who seems to appear from nowhere, who comes to demonstrate the professional classroom management skills the Apprentice is trying to develop. This is an example, perhaps, of the type of question which might provide a productive starting point for tutorial discussion about professionalism.

One of the 50 student-teachers did not attribute to himself even an apprentice role. In his story he was a goblin teaching a class of other goblins, while the experienced teachers on the staff of the college, including his mentor, were ‘a gang of giants.’ On reflection the narrator concluded that this very accurately represented his current perception of his role, which he felt to be low status, powerless, and looked down upon by colleagues, while any solidarity he felt was with the students (‘all goblins together’) rather than with colleagues or fellow student-teachers. Rather than being downhearted by this realisation, the narrator claimed that the insight made him feel empowered to change the circumstances he found himself in on his teaching practice placement.

It was clear that reflection on these stories was raising for their narrators some important questions about professionalism, belonging and acceptance, as well as about behaviour management which had been

the initial concern for most of them. It was also clear that the activity had generated a high level of enthusiasm. One of the participants wrote in his commentary, ‘I didn’t realise there were different ways to go about reflecting. I could use this approach in my journal.’

#### 4.6. Developing empathy

Another finding to emerge was the use the studentteachers made of their fairytales to search for insights into student motivation and attitudes. This is an example of what Rorty [5] means when he writes about fiction serving the function of building ‘solidarity’. The writing of tales opens up the possibility of understanding and empathy with ‘the other’ (in this case with uncooperative students), since the narrator is in the privileged position of taking up, if he or she wishes, an omniscient point of view within the context of the story. Their narrative, therefore, may include the ‘voice’ or consciousness of other characters within the tale. One of those who took the opportunity to do this commented afterwards on its usefulness, having given a non-compliant ‘pixie’ this to say:

‘I don’t understand why the witch has sent me out. Everybody was messing about. Why me? It must be because she hates me.’

In her commentary the student-teacher writes:

‘The student-pixie doesn’t see the sense of what I’ve done. So he doesn’t learn anything from it. He just ends up with lower self esteem, thinks I hate him, so he’ll probably just play up all the more.’

### 5. Conclusions

The advantages of the fictional approach were evident in this exercise. It did succeed in encouraging a greater depth of reflection; it enabled discussion of areas of experience and professional practice which might, given a factual approach, have been too sensitive or left people feeling exposed and vulnerable; and it proved effective, too, in encouraging empathy towards others’ points of view. Nevertheless, the potential ethical and methodological dangers of this approach should not be underestimated. The temptation for the tutor to step in and ‘interpret’ a student-teacher’s story for them will always be strong, not least because the deconstruction of stories provides an ideal pedagogical tool. But such an invasive step would, as well as offending against the ethics of such research, defeat the purpose of encouraging independent reflection, and would disempower the new practitioner every bit as much as the smug and

interfering Prince who steps into the classroom and sorts out all their problems for them.

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# Subtle Dynamics between Freedom and Control: Understanding of Music Teacher's Professional Autonomy in China

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## Abstract

*Autonomy is defined as freedom from control in sociological interpretation. This study aims at exploring teacher's role in decision making at work, and how the external authorities impact on their decision making process in the educational context of China. Due to their special status of teaching an un-regulated subject in the educational context of China, the cohort of music teachers provides a special angle to observe the mechanics of freedom and external control on teacher's practice of PA. By examining the way in which the external counterparts affect music teachers, it is found out that teachers' PA does not simply equal to the freedom they possess at work. Instead, it is situated in such a complicated mechanism that many factors affect the extent and way teachers practice their PA. Moreover, each factor affects teachers' autonomy as facilitators which increase teachers' competence and confidence in making professional decisions, and barriers which impose control and pressure in professional decision making. Based on these findings, the study understands teachers' professional autonomy as their decision making power existing in a subtle dynamics of freedom and control.*

## 1. Introduction

There are substantial definitions and interpretations in different fields of study with regard to the concept of autonomy. The most common consensus in the contemporary sociological interpretations, professional autonomy is defined as freedom from external authority [6], [7], [8]. In this definition, professional autonomy is interpreted as a competition between the control from the external authorities and the freedom of choice or decision making by the professionals.

According to this study, teacher's professional autonomy exists in a complicated mechanism in which the relationship between control and freedom is boundaryless. There is no absolute freedom or control during the process of teachers' exercise of professional autonomy. Controls from the external authorities can be both facilitators and barriers for the decision making power. Freedom is not necessarily facilitating professional autonomy in

practice. Taking music teachers as subjects to examine the nature of teacher's professional autonomy, this study argues that music teachers' professional autonomy is relative freedom.

The nature of music teacher's professional autonomy can be interpreted from two perspectives, i.e. the perspective of control from external authorities and the perspective of power in decision making.

## 2. Control as both facilitator and barrier for music teacher's autonomy

It is found out in this study that teacher's autonomy refers more to the power and ability that teachers exercise in making professional choices and decisions, rather than "freedom" in professional decision making. In other words, teachers' professional autonomy does not equal to their freedom at work. Furthermore, external authority is not necessarily at the opposite of autonomy. Instead, the control from external authorities can be facilitating factors in the process of teachers' exercise of professional autonomy. In terms of facilitating conditions, control of certain extent can encourage teachers' awareness and willingness in practice professional autonomy.

Completely free from control takes off teacher's sense of responsibility and willingness to practice autonomy. This was reflected by the interviewed music teachers in this study who explain that being exempted from the standardized examinations, music subject as well as music teacher gains low status and little attention at schools, which impairs the power in decision making at their work. In some cases, the teachers have freedom to make any choices or decisions, but without support from the external authorities, such as the school principals or administrators, these choices and decisions cannot be carried out. Consequently, being overlooked at their working contexts, music teachers' enthusiasm in autonomous teaching or participation in school affairs has been reduced and effaced gradually. However, in some demonstration schools where music education is taken as an important indicator of "quality education" to increase competitiveness in the educational market, music teachers have more pressure on making achievements in their teaching,

especially in the extra-curriculum activities. Under this circumstance, with the pressure and control from the school leaders, music teachers are inspired with more awareness and willingness in autonomous teaching as well as contributing to their school development.

In the existing studies regarding to the issue of autonomy in the educational arena, researchers recognize institutional administration as the major source of control on individual teachers [3], [4], [5], [9]. In these studies, the individual autonomy is on placed one side and the institutional administration on the other side. Herein, the administrative control is taken as a barrier for individual's practice of autonomy. However, according to the findings of this study, the institutional administration has another part of function as administrative support on individuals.

It is inevitable how administrative support can facilitate teachers' professional autonomy. The extent of administrative support from the schools also facilitates teachers' motivation in practicing their professional autonomy. For instance, novice teachers and teachers with lower professional titles reflected more concerns about the issue of professional autonomy at their work, and have more enthusiasm to develop themselves to be more competent to teach and work more autonomously. However, the more experienced teachers act contrary. In this sense, teachers need some extent of administrative pressure to motivate their consciousness in professional autonomy at work.

To sum up, control from external authorities has double-sided effects on individual teachers. On the one hand, controls can be administrative or professional domination which blocks teachers from either making or carrying out their choices and decisions. This is considered to be barrier for teachers' practice of professional autonomy. On the other hand, the external controls to certain extent can be facilitators in teachers' autonomous decision making, which inspires teachers' willingness and capacity to work autonomously by adding pressure and support on them.

### **3. Autonomy as decision making power of music teachers**

The problem of autonomy is about the competition between two camps of power: power from external control, and power from the autonomous person. It is argued by Berka that autonomy is "determinative power" of the institutions or individuals under the impact of the external counterparts [2]. According to the definition of power, it is a measure of a person's ability to control the environment around them, including the behavior of other people. Lukes argued that people

exercise power by influencing, shaping, or determining his wants and preferences [11]. In this sense, the decision making power can be manifested by the influence and effect caused by the decision made by an autonomous person. If the decision cannot be executed with effect or impact on the environment, it is meaningless how much freedom one has in making the decision. Therefore, in order to turn the freedom of making decisions into autonomous decision making power, it is necessary that the autonomous person has the capacity in making and implementing decisions, and there is a supportive environment for the decisions to be carried out.

Barfield et al. interpreted that teachers' professional skills and capacities in teaching and problem solving within the working conditions have been underscored in the components of teachers' autonomy [1]. Similarly, Littlewood pointed out that *ability* and *willingness* are two main components of an autonomous person [10].

Examining the working context of music teachers in China, it is found out that there is another source of control which enhances teacher's willingness and confidence in practicing their professional autonomy. Teacher's willingness includes their sense of responsibility and motivation at work. According to the investigation of this study, music teachers who are granted with more freedom and support by the school policy and their administrative and professional leaders perceive higher extent of autonomy at work. Teacher's confidence comes from the professional competence of themselves and the trust and positive appraisal from their students, colleagues and leaders. It is the control and influence generated from the leader-centered collective teacher development system. The multi-level teacher leadership system has been set up to guarantee teacher's professional development. As discussed previously, teachers' professional growth is an important facilitation for their practice of professional autonomy. Within the circumstances where music subject is not gaining much attention, music teachers and the teacher leaders work collaboratively to increase the possibility of exercising professional autonomy, which in this study is regarded as professional collegiality to counteract external administrative controls from outside of the community.

This study argues that music teacher's professional autonomy is efficient when freedom and control is at a dynamic balance to facilitate teacher's competence and willingness at work. Other than this, the following variety of freedom and control can be invalid or barrier in their practice of professional autonomy (see Figure 1): the passive freedom, in the case of music teachers, due to the inconsequential status of the subject they teach, teachers are ignored and depreciated at work, unawareness of freedom

they have, excessive control from administrative and professional agents, and distrust from school leaders, colleagues, students and parents.

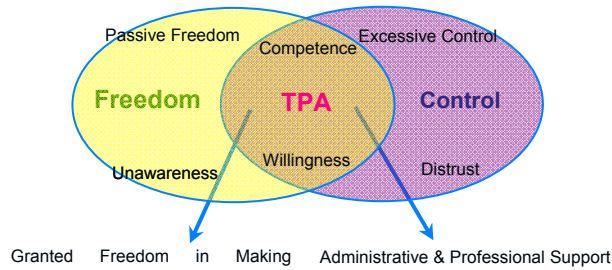


Figure 1. Dynamics between Freedom and Control for TPA

Summarizing the viewpoints collected among the informant music teachers in this study, it is found out that the sense of external control and the confidence in their own professional competences are the two edges determining teachers' practice of professional autonomy.

To sum up, the complete freedom from control can cause dilution in teachers' willingness and enthusiasm in practicing their professional autonomy. However, control and pressure to some extent encourages teachers to work autonomously. The control and pressure mentioned is mainly from the administration sphere.

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# Level, Causes and Coping Strategies of Stress during Teaching Practice

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## Abstract

*This study explored the concerns of a group of student-teachers during a period of school placement for teaching practice. The major objective of this study was to assess different level, causes of stress and coping with those stressors among student teachers during their one month teaching practice. The population of the study includes all the students who have completed their teaching practice from International Islamic University, Islamabad during September –December semester 2009. All the students (95) were taken as sample of the study. A questionnaire was administered for student teachers in order to identify the mentioned areas. Researcher personally contacted the students-teacher to fill in the questionnaires after getting their consent. This study reveals that most of student-teachers experience moderate level of stress during teaching practice. Five main areas of concern were identified. These were: heavy workload, Evaluation by Supervisor/Teacher, Classroom Management, Writing detailed lesson plans and related to final lesson. In addition three main coping strategies were identified. These were: Communication/feedback (talking to the teacher/ supervisor), Talking to the friends/family and Use of self-management skills such as preparation, planning and organizational skills. Student-teachers identified need of more coordination between university supervisor and cooperating school is required Assigned schools should take student-teachers as internees, Formative assessment instead of final lesson assessment. The paper also considers the implications of these findings for improving the quality of initial teacher education.*

## 1. Introduction

According to Collins English Dictionary student-teacher is a person who teaches in a school for a limited period of time under supervision as part of a course to qualify as a teacher [1]. Traditionally, student-teachers are assigned to cooperating teachers in school setting for 5 to 8 weeks. Therefore; every student in a teacher education programme is expected to practice teaching in a real situation. It provides as the pre-service teacher's beginning into the real-life world of the school. It is a full day, full time, school-based experience that is supervised by

both a certified experienced teacher and a university supervisor. The purpose of student teaching is to offer the opportunity for attaining and exhibiting teaching skills in schools with trained and experienced cooperating teachers. Teaching profession causes a very high degree of stress [3]. As it is a fact that students with high academic achievements cannot assume to be a successful teacher automatically [4]. Though, there is a body of professional knowledge and set of skills that are considered necessary, but not sufficient, for achieving teaching effectiveness [5].

The present study is focused on exploring different levels of stresses, courses, coping strategies adapted by student-teachers during their teaching practice. Knowledge of how student-teachers cope with those stresses is valuable as it inform to teacher education programs for adapting effective ways of providing support to them. Little research has addressed student-teacher stress related to practice teaching in Pakistan. The present study attempted to find out answers to the following research questions:

- What is the perceived level of stress experienced by student-teachers during practice-teaching?
- What are the major causes of stress?
- What strategies student-teachers adapt to cope with those stressors?
- What student-teachers suggest for the improvement of teaching practice?

## 2. Literature Review

It has long been documented that teacher education students experience high levels of stress that ultimately hinder their learning [6,7,8,9]. Research findings support the notion that teaching is a stressful profession [3, 10]. A high level of stress among student-teachers may be attached to various negative consequences such as class control problems and classroom disruption. Preece found a relationship between student-teacher stress and class management problems [11]. Hart also reported a positive correlation between student-teacher stress and classroom disruptions. Therefore, stress appears to be a relevant characteristic of student-teachers [12]. A number of studies in various countries have explored the extent to which student-teachers experience stress from practice teaching related factors. Some studies indicate that student teachers

experience moderate levels of stress/anxiety [12, 13, 14, 15, and 16]. Some others show that student teachers report high anxiety levels [17, 18, 19, 20, and 21].

Several studies have also looked at the nature of student-teacher stress related to practice teaching. It was shown that student-teacher in Great Britain experience stress from factors such as evaluation, pupil and professional concerns, class control and teaching practice requirements [12]. It has been reported that student teacher stressors were related to evaluation, pedagogical, classroom management and staff relations factors [16]. It has been reported in her study that she conducted among student-teachers in Canterbury that stress was due to evaluation, professional preparation, class control, and school staff factors [15]. Notably, student-teacher stress factors related to practice teaching are common in many countries. These studies also reveal that student-teachers world-wide are anxious about evaluation. Researchers have noted that student-teachers' perceptions of potential sources of stress related to practice teaching can vary greatly from individual to individual. They further assert that there are differential reactions to stressors as a function of variables such as personality culture or even sex [22, 23]. In a study of student-teachers who were attending a faculty of education at a Canadian University, it was observed that females experienced higher levels of stress than males prior to practice teaching [16]. Preece however, did not find sex-linked differences with regard to class control problems [11].

Teacher stress is a complex problem that has been well documented in the literature [24, 25, 3, 26]. It has been stated that teaching is one of the professions where high level of stressful situation is predictable and student teacher have to cope with the similar stressful experiences, such as those faced by practicing teachers [27]. Researches and specifically statistics shows that coping with the stress of teaching needs to be addressed at the pre-service stage of teacher's career, so that the teachers who are leaving the profession as they find their work environment too stressful, can be on hold on to their profession. A study shows that 50% of teacher-trainers enter and continue with the profession, and many of them leaving to find less stressful careers. According to them it is the teaching programs, that can make the most of efforts to ethically support and indulge teacher trainers to effectively and enhance with the strategies that can minimize student teacher stress level and make an effort to formulate an interesting practicum for student teachers [27]. A study shows that student-teacher learning process is greatly affected by the stress they experience during practicum [28]. Stress has countless harmful effects as it can cause physical and mental health problems and minimize memory and learning skills of

individuals. It also numerously effects on students' self-esteem and definitely on their academic performance.

Another study shows that poor concentration, impaired decision making are the common symptoms of stress [29]. The present study is focused on exploring different levels of stresses, courses, coping strategies adapted by student-teachers during their teaching practice. In Pakistan very few studies have been conducted so far in this area.

It is important to identify general level of stress as some amount of stress can have a positive influence on motivation and creativity; if it crosses that extent then excessive pressure has an overwhelming and atrocious effect [30]. Unfortunately, classroom teachers experience far greater pressure than is beneficial. Knowledge of how student-teachers cope with those stresses is valuable as it inform to teacher education programs for adapting effective ways of providing support to them. Unlike the majority of researches suggestions from student-teachers for the improvement and for reducing stress during teaching practice were invited through open-ended question.

### 3. Methodology for the Present Study

The study was survey in nature. All male and female student-teachers enrolled in Bachelor of Education (B.Ed) and Master of Education (M.A) programs at International Islamic University, Pakistan, during semester Fall 09 formed the population of the study. A questionnaire was designed to explore the general level of student-teacher stress; the sources of student-teacher stress, the coping strategies used by student- teachers, and what actions student- teachers' suggest need to be taken to reduce student- teacher stress and for the improvement of teaching practicum. Unlike the majority of researches, suggestions from student-teachers for the improvement and for reducing stress during teaching practice were invited through open-ended question.

Student-teachers were invited to attend a concluding session prior to the commencement of the examination. In this session, they were briefed about the study and then were asked to complete the questionnaire. All present (91 out of 95) students completed questionnaire. A total of 95 student-teachers including fifteen males and eighty females were the target sample of the study. These students had a sound background of theoretical teaching since they had completed 90% of their courses.

#### 3.1. Instrument

A questionnaire that contained four parts was designed and each part contained number of items to explore the perceived level of student-teachers stress,

the sources of their stress, the coping actions used by student teachers, and what they suggest to improve practicum. The first adapted part of the questionnaire was developed by Cohen that measures the degree to which situations in one's life are appraised as stressful [31]. This adapted part of the questionnaire is considered the most widely used psychological instrument for measuring the perception of stress. Items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives. The scale also includes a number of direct queries about current levels of experienced stress. In addition, the questions are of a general nature and for this reason are relatively free of content specific to any sub-population group. The questions in the PSS ask about feelings and thoughts during the last month. In each case, respondents are asked how often they felt a certain way.

Second part consists of a question identifying 30 items that may cause stress during teaching practice. The five causes that participants graded highest stress producing out of thirty were highlighted in this paper. Whereas third part asks for spotting coping strategies they adopt frequently to combat with stressors during teaching practice. This part consist of eight items, out of that three coping strategies, highest graded by the participants were discussed in this paper. Forth part of the questionnaire contains an open-ended question asking suggestions from student-teachers for the improvement and for reducing stress during teaching practice.

#### 4. Analysis of Findings

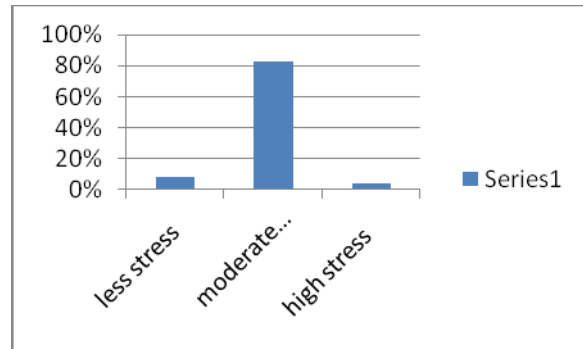
Data collected through questionnaire were analyzed using percentage calculation of the responses. Following are the details of the analysis.

##### 4.1. Level of student teachers stress

The responses of the student teachers to the question on the perceived level of stress experienced are shown in Table I.

**Table 1. Overall student teachers stress (percentages, N = 95)**

Less Stress	Moderate stress	High stress
8 %	83 %	4 %



**Figure 1. Graphic representation of the Perceived Level of Stress in Student Teachers**

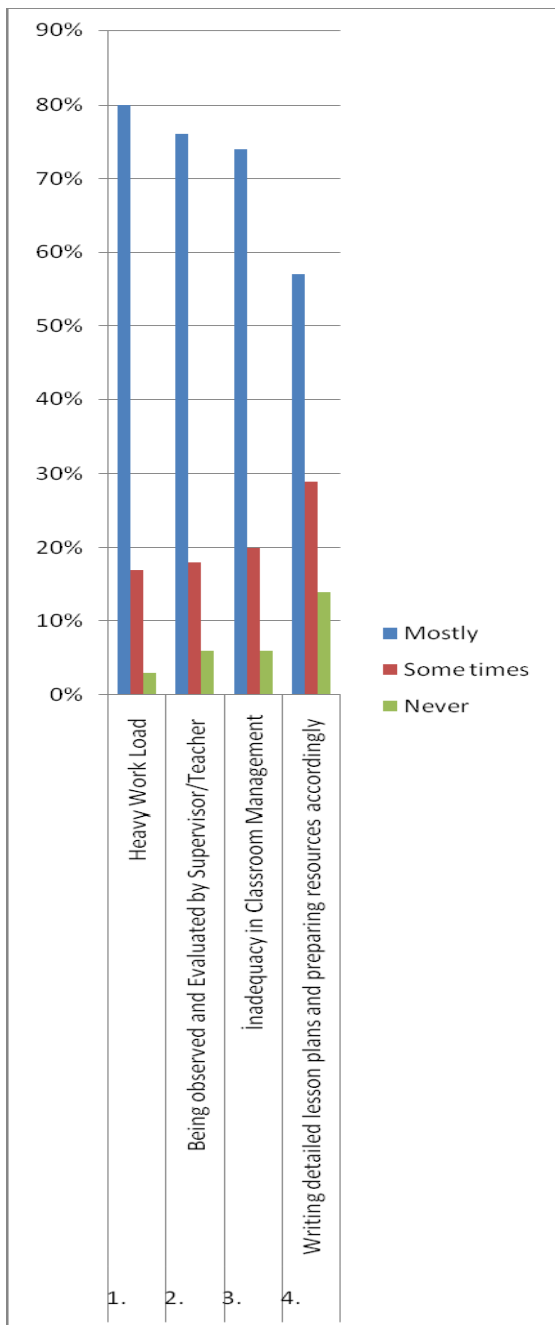
The responses of the student teachers to the ten statements relating to the feelings and thoughts during the last month were asked to determine the level of stress they experience are shown in Table 1. Results revealed that the level of stress felt by majority (83%) of the student-teachers was moderate, 08% student-teachers were less stressed, and 04% student-teachers were severely stressed. This shows that most of student-teachers experience moderate level of stress during teaching practice. The level of stress varies in nature and severity but a significant prevalence of stress is found. Some studies indicate similar levels of stress that student teachers experience [12,13,14,15,16]. It is contrary to the findings other studies found high stress levels among student-teachers [19'20'21]

##### 4.2. Causes of student teacher stress

Second part of the questionnaire contained a list of 30 items that may cause stress during teaching practicum and were derived from the literature review. Out of those 30 items, four were selected for discussion that student-teacher rated highest as stress producing factors during practicum than others.

**Table 2. Major causes of student teacher stress (percentages, N = 95)**

S No	Stress produced by the factors	Mostly	Some times	Never
1.	Heavy Work Load	80 %	17%	3%
2.	Being observed and Evaluated by Supervisor/Teacher	76%	18%	6%
3.	Inadequacy in Classroom Management	74%	20%	6%
4.	Writing detailed lesson plans and preparing resources accordingly	57%	29%	14%



**Figure 2. Graphic representation of the major stressors which bother student teachers during Teaching Practice**

### 4.3. Heavy Work Load

Heavy workload is considered as a significant cause of stress during teaching practice. Data revealed from the study that major cause of student-teachers' stress was heavy workload during practicum as 80% listed it at the top. Stephens has pointed out how student-teacher can sometimes be inundated by a heavy tasks everyday [32].

No doubt, student-teachers have to prepare lesson plans, arrange teaching aids, assessment of the previous work given by them as home work in the class. All these activities exhaust them. Students-teachers informally reported that they had

spent several sleepless nights during Teaching Practice, as they had to prepare lesson plans and teaching aids for two/three subjects every day.

### 4.4. Being observed and Evaluated by Supervisor/Teacher

Student-teachers have a lot of concern about their evaluation [16]. Evaluation by Supervisor/Teacher is a major factor causing discomfort to student-teachers. This refers to stress influenced by being observed by one's teacher of school or supervisor. 76% of the student-teachers in this study were of the view that evaluation by supervisor/teacher keep them stressed during their classroom teaching. A study on student-teachers in England reported that main cause of stress for student-teachers was being observed, evaluated and assessed [15]. Student-teachers often complain that they forgot the content matter and feel nervous when teacher sits at the end of classroom and observes. The behavior of student-teacher changes, comfort level becomes low and they find themselves in artificial situation where their main consideration remains to get good remarks in record files. Pressure of doing things correctly and managing classroom activities properly make them tense and apprehensive while teaching. Some of the student-teachers overcome this within few days but for others it acts as a barrier to gain full confidence. Cole and Knowles give emphasis to university supervisors to provide pre-service teachers with adequate preparation and support and place less emphasis on evaluation [33].

### 4.5. Inadequacy in Classroom Management

Another area of concern of student-teachers is their feelings of inadequacy in managing classrooms that was causing stress amongst student-teachers, as reportedly by 74% student-teachers. Discipline problem with the pupils was a definite challenge for the student-teachers. A study conducted at Exeter University showed that discipline problem enhanced stress amongst student-teachers at their career's start [11]. It is found that it becomes difficult to maintain discipline in the classroom when the topics or lesson taught is already been taught, or covered by the teachers.

It appears from the findings that student-teachers need improvement in understanding child psychology, in experiencing different teaching situations, and in becoming competent in contemporary teaching methods but along with that one has to learn that classroom management skills are acquired and polished over time. These skills almost never "jell" until after a minimum of few years of teaching experience. Effective teaching requires considerable skill in managing the myriad of tasks and situations that occur in the classroom.

Teachers require understanding in more than one way the psychological and developmental levels of

Table 3. Coping Strategies

S No	Strategies	Mostly	Some times	Never
	Communication/feed back (talking to the teacher/ supervisor)	58%	24%	18%
	Talking to the friends/family	54%	27%	19%
	Use of self-management skills such as preparation, planning and organizational skills	49%	33%	18%

their students. Effective classroom management skills are only acquired with practice, feedback, and a willingness to learn from mistakes.

#### 4.6. Writing detailed Lesson plans and preparing resources accordingly (e.g. charts, worksheets, handouts, etc)

The student- teachers are supposed to prepare at least two lesson plans every day that has to be signed by the university supervisor and cooperating teacher at least one day in advance. Comments to improve lesson plans are also provided to the student- teacher where appropriate before implementation in the classroom. Majority of the student-teachers (57%) found writing detailed lesson plans along with appropriate teaching aids and then preceding it in the classroom accordingly the most stressful factor for them. It is a fact that paper planning fails sometimes to match proceedings in the classroom. Things that are put down on paper do not always match up with realities of the classroom. This situation makes student-teachers nervous as they have to mentally readjust or re plan their written lesson plan. Introductory questions or lesson developing questions are not answered as anticipated by student-teacher sometimes intentionally or unintentionally by classroom children.

The teaching practice is a vital aspect of teacher training program. It serves as an opportunity to be exposed to the realities of teaching and performance of professional activities. Before onset of teaching practice session, if less preparatory time is provided to student teachers, it may lead to difficulty in translating theoretical ideas in practical shape due to lack of time to reflect and improve. These were deemed as being the main types of stress causes that were raised during student-teachers' school experience.

## 5. Coping Strategies for Stress During Teaching Practice

Coping behavior is described in terms of efforts to manage (i.e., master, reduce or tolerate) a troubled person environment relation [34]. The term coping strategies is used here to describe the ways that student-teachers manage the events or situations they regarded as stressful.

In the third part of the questionnaire, student-teachers were asked to mention the remedial strategies they use to overcome their stress during teaching practice. Following table shows three coping strategies that majority of the student-teachers use out of ten given in the questionnaire.

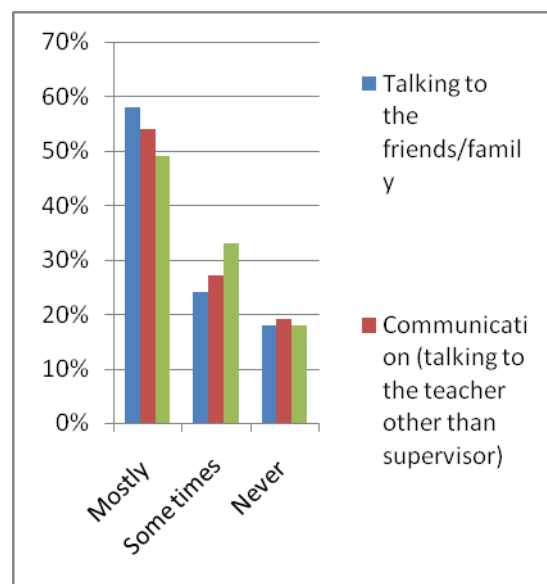


Figure 3: Graphic representation of coping strategies for stress

### 5.1. Communication with supervisor/teacher and getting guidance/feedback

The support and time of the supervisor (other than instructional time) provides a great help in stressful situation. Data indicated "communication with supervisor/teacher" was the most important strategy as 58% student-teachers get relief when they discuss their problems with their university supervisor and get guideline from them. This is in agreement with previous findings in other studies. The most important support for the students during their teaching practicum was teacher/supervising the practice teaching, and feedback sessions students had with this person [8, 35]. This proves that there is more need to create opportunities for meaningful feedback and constructive criticism on student-teachers' performance. Experiences can work as the foundation for learning only if they are together with constructive feedback [36, 37]. Feedback from the teacher is a vital ingredient



of school experience where the students learn about themselves through the eyes and ears of a more experienced person; however it is important that it is sensitive in approach, constructive in meaning, and suitably timed.

### 5.2. Talking to the friends/family

Student-teachers responses highlighted talking to the friends/family as (54%) used it stress coping strategy to get them relieved. Teaching is a compulsory component of pre-service teacher education whatever the situation student-teachers, undergo practicum therefore, getting help from family and friends in times of difficulty is natural. As they are the people who know the situation that student-teachers were facing, their sympathetic attitude and some of caring words may revitalized them to work again. Research study reveals that turning to family and friends in times of crisis or simply for conversation and reflection was a significant coping strategy [38].

### 5.3. Use of Self-Management Skills such as preparation, planning and organizational skills

Self management skills improve personal competencies and stress tolerance improves. Hence, an individual's ability to perform personal and professional activities strengthens. 49% student-teachers use self-management skills such as preparation, planning and organization as remedial strategy to reduce their stress level. They plan the things more effectively and efficiently to complete one month of teaching practice. They try to be well organized to prevent a last minute panic.

Use of self-management skills such as preparation, planning and organizational prevents them to be panic.

### 5.4. Suggestions (given by student teachers)

Forth part of the questionnaire contains an open-ended question inviting suggestions from student-teachers for the improvement and for reducing stress during teaching practice.

Common themes come out of this section:

- **More guidance before start of Teaching Practice**

Majority of the student-teachers commented that prior to the commencement of their field experience, they need more guidance and support from the university. It appears the most effective way of alleviating stress these students face in their field experience and ultimately could enhance the quality of learning they provide to their future students and potentially reduce their own risk for stress. As one of the student-teacher commented: *"A number of more specific briefings on what exact requirements are needed of your school experience and how it should be planned should be introduced as this is somewhat a vague area."*

- **More coordination between university supervisor and cooperating teacher is required**

The student teaching field experience is an essential component of learning to teach and supervision plays an important role [39]. Lack of communication and collaboration complicates student-teachers practicing teaching process. Student-teachers were of the view that there is lack of coordination between university supervisors and cooperating teachers about their respective expectations of the goals of student teaching; the instructional approaches with which student-teachers should experiment. As a result, cooperating teachers and university supervisors often misunderstand each other, lack unity in front of the student teacher, and continue to teach and supervise the way they always have instead of working as a supervisory team.

University supervisor may be limited in their interactions because of their teaching and research responsibilities but this highly demanding responsibility can not be ignored. Though, the cooperating teacher seems to be most influential because of her close interaction with the student [40]. It is important that both create a working relationship based on mutual respect and understanding for each others' expertise, perspectives, and roles so that student-teachers can incorporate fully both the theoretical and the practical into their teaching.

- **Assigned schools should take student-teachers as internees**

Student-teachers suggested to be assigned jobs according to the requirement of their training as most of the time they are assigned tasks with high expectations from their cooperating schools leaving them alone in the classes which messed up every thing thus increase the stress level and deviate them from their focus of training. One of the respondents viewed as

*'Schools should be informed about the students' and their duties in detail. More guideline should be given'. "At times, assigned school did not know exactly what we were meant to be doing and gave me unrelated assignments and after having particularly long and hard day in school, I found it incredibly difficult to go home and plan lessons for the next day or had little will to continue".*

- **Formative assessment instead of final lesson assessment**

According to some of the respondents, the mode of teaching assessment may be shifted from summative to formative assessment. As they further explained their views by saying that this training must be integrated with the theoretical aspect of teaching during course work. As doing theory in isolation and practicing that theory separately makes no sense.

*"I was nervous when supervisor came in the class, I found it very stressful. They are assessing you on one lesson and this does not reflect how you normally teach".*

## 6. Contribution to Knowledge

The study attempts to reflect the teaching practice of teacher education programs in Pakistan which has some problems and issues regarding the stress factor. It is expected that the present study will provide a foundation for further studies in the area and will definitely contribute to the existing source of knowledge in this field which will further be helpful in improving the teacher education program run by different institutions with an ultimate hope for the betterment of future of teaching in Pakistan.

## 7. Conclusion

It is clear that student practical experience is vital to the preparation of qualified professional fractionators. The effectiveness of professional training program is closely linked to the quality of this practicum component and be perceived as such. In this light, the researcher in this study concurs with what Pearcey and Elliott asserted: "Students views are necessary ..., but more importantly these views need to be acted upon" [41].

The study shows that most of student teachers experience moderate level of stress during teaching practice. Stress experienced by students in their practicum has been reported in enough studies to indicate that it is not an isolated phenomenon. In order to maximize the benefits of the teaching practicum for student teachers and for teacher educators, both need to address the concerns of students related to their teaching practice experiences. The best way to deal with stress is to try to prevent it occurring, and this research would seem to indicate the need for teacher education program and teachers/educators to include some stress identification and management courses in teacher training. There is a need to provide additional support to pre-service student-teachers prior to the commencement of their field experience.

This study provided us information about causes of stress experienced by student teachers during teaching practicum. This study sought student-teachers' views on important sources of support for coping with practicum stresses. Findings indicate the value of family and friends they experience during the practice teaching. Family, friends, cooperating teachers and university supervisors are recognized as vital sources of support, they use as coping with stress. Data also reveal that a substantial group of student-teachers use self-management skills as remedial strategy to reduce their stress level. Knowledge of how students cope with practicum stresses would have the benefit of informing teacher education programs of the most effective ways of providing them support.

Student-teachers were of the opinion that they experience most of the time tension and get stressed regarding university supervisors' roles during field experiences. They further emphasized that university supervisor to provide sufficient training, facilitate professional development, and provide regular help instead of focusing on final evaluation only.

The University supervisor is a link between the cooperating school and the University. The student-teacher, the cooperating teacher, and the University supervisor need to work as a harmonious team for implement effective learning procedures and create professional working relationships.

## 8. Further Work

It is clear that student practical experience is vital to the preparation of qualified professional fractionators. The effectiveness of professional training program is closely linked to the quality of this practicum component and be perceived as such. In this light, the researcher in this study concurs with what Pearcey and Elliott asserted: "Students views are necessary ... but more importantly these views need to be acted upon" [41].

Educational administrators who desire to improve their programs must consider students' views in any effort toward practicum innovation [42]. Students enrolled educational program are among the most qualified persons to render judgment on how effectively the programs' structure and processes meet their unique learning needs and interests, because ultimately the students are the only group who encounters *all* of facets of the program, en route to certification or graduation. The findings of the present investigation calling for further study such as:

- Investigating the effects of stress
- Extending the study from case to a broad-based survey
- Implementing the findings of the study to bring about change in teaching practice

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# Building Reflective Relationships through the Creation of Educational Knowledge: Tutors Working with Primary PGCE Students

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## Abstract

*This paper explores the reconnaissance phase of an action research project concerned with the development of primary PGCE students embarking upon a 38 week teacher training programme in a north of England University. It considers how students are learning to become teachers and how tutors are beginning to understand their needs. The programme has currently undergone radical change in module structure in response to student feedback. An enquiry-based learning approach is being used to make changes to the structure of the professional modules. This is also having an impact on tutor understanding of what it means to be a teacher. The project is now beginning to explore relationships with schools as approximately half of the students' time is spent in primary schools. Ultimately, the project is concerned with the level of reflection that both tutors and students can engage in to improve practice.*

## 1. Introduction

This paper outlines the ongoing research into how students learn to become primary school teachers and how the programme is reflecting upon their practices, in order to improve provision for students.

## 2. Towards enquiry-based learning

The re-validated PGCE Primary programme (May 2007) has the enquiring teacher at the very heart of its curriculum design. Core professional modules have been written to encourage and enable opportunities for student teachers to reflect upon their development across a 38 week programme. Strategies include the submission of a reflective learning journal, a comparative essay on two teaching experiences in the first assessed teaching placement, and also a research project based in the final teaching placement. These assessed pieces of work at Masters Level will provide evidence that student teachers have met the programme aims, as well as the Training and Development Agency (TDA) Standards for Qualified Teacher Status

(QTS). One of the essential qualities which students are expected to demonstrate in becoming teachers includes that of reflection [6], [18], [19], [22]. Since 1992, students have to meet government prescribed competence-based Standards in order to be recommended for QTS. One of the 2007 revised Standards (TDA) that students must meet is one where they 'reflect on and improve their practice, and take responsibility for identifying and meeting their early developing professional needs.' [21]. This would seem to suggest that students are required to take responsibility for their own learning. Autonomy and self-direction of one's own learning are discussed by Faure [5] and Boud [1] who believe that these are preferable to traditional education which 'has been based on the premise that the central purpose is to produce knowledgeable persons' [21]. Webb [23] argues that 'the stranglehold of accountability insisted upon by the Labour government in recent years has reduced the potential for teacher creativity' and, therefore, a possible return to the delivery of what Boud calls traditional education [1]. This has arguably resulted in students entering higher education having experienced learning in a passive or non-active way. Boud continues: "...most people seeking higher education have learned only the skills of learning by being taught. They do not know how to diagnose their own needs for learning, for formulating their own learning objectives, identifying a variety of learning resources and planning strategies for taking the initiative in using those resources, assessing their own learning, and having their assessments validated."

Nearly twenty five years later, Jones et al suggest that the autonomy of the teaching profession continues to be threatened [12]. So, are learners in higher education still expecting to be 'taught'?

## 3. Supporting reflection

Moon suggests that critical thinking involves reflection and that some aspects of reflection require critical thinking. She sees reflective learning as 'a form of cognitive processing of complex issues'. At a deep level this cognitive processing involves a synthesis of prior experience, multiple view-points,

meta-cognition and an awareness of broader contextual issues, together with the emotional response which may influence thinking.

To achieve this it is necessary to support students' individual intellectual engagement. Being critically self-aware is an acquired skill that comes with experience and great intellect and thus not everyone is capable of engaging in critical reflection. Students have not yet explored their personal theories of teaching and learning and are also faced with long term held views of practising teachers [10]. Providing a knowledge and experiential base at an appropriate level through lectures, workshops, school experience and study tasks, is within the immediate control of the Partnership. Supporting and challenging student's thinking about their learning and their experience of teaching and learning within schools however is less straightforward as experiences are very varied. In order to achieve the necessary depth of criticality and analysis for students to be involved in the self-direction of their learning they need to learn to raise questions, to provide reflective account rather than description of their experience and to be conscious of their own thinking processes. This would entail more self-awareness and self-questioning including recognition of the influence of their own emotional response and previous experience on their ideas and the willingness to challenge their own ideas and take account of other's views.

In order for students to leave the course as confident and independent reflective practitioners, further 'tools' for reflection were offered as a support in addition to student-led seminars and learning journals already part of the programme.

Gokhale found that through discussion, clarification and evaluation of their own and others' ideas, student's development of critical thinking was fostered [7]. An initiative was introduced in the previous year in which students formed learning partners so they could actively engage in an exchange of ideas and a sharing of experiences and become interested in each other's concerns. They were introduced to the notions of learning with and from each other, how to build upon each other's experiences and use these as a resource for further learning and the idea that different perspectives have validity. They were also given the opportunity to raise doubts and concerns and to encourage the sharing of issues in what some saw as a competitive climate. Students felt their collaborative discussions although better when kept informal and within friendship groups helped them to understand different perspectives and difficult ideas, manage difficult issues and gave them the confidence to express their thinking especially when working with other colleagues. In other words they were more able to express 'academic assertiveness'; personal

confidence and ability to 'process, work with and express critical ideas and action' [16].

#### **4. Questioning and autonomous learning**

As Hutchings states, enquiry-based learning is a term that describes any process of learning through enquiry [11]. Enquiry by its very nature involves investigation through the asking of questions. If a learner can ask questions, it could be suggested that this would involve active participation, leading to a deeper level of understanding, as Stoner suggests: '... students who learn to ask significant questions and then pose answers to them move toward intellectual autonomy. They are freed from having to wait for someone else to set their learning agenda.' [20].

Not only, then, could students ask questions of their own practice, but they could also attempt to find the answers to these.

Higgs states that autonomous learning is characterised by independence and active decision making in learning activities, where the teacher is used as a resource [9]. This is what is intended for the students in the PGCE programme. The programme aims for them to leave the course and enter the teaching profession as confident, independent and reflective learners, in agreement with Knowles [13] who believes that adults need to be involved in the self-direction of their learning. Boud issues caution again, in that there is a difference in how students have experienced learning and teaching and the skills they bring to their own learning situation.

#### **5. Methodology**

The study lends itself to an action research methodology. Action research is about change [15] and can occur at micro level [4]. Lewin [14] first introduced the phrase 'action research' meaning the 'process through which theory building and research on practical problems should be combined' [8]. Action research is a problem-solving activity that can lead to further questions as you continue through a spiral reflective process. This spiral involves planning, acting, observing, reflecting [14] and then re-planning, further implementation, observing and reflecting [3]. Whitehead and McNiff see action research beginning with a concern, rather than a problem, as they emphasise the self as a central part of the process. The concern related to whether students were able to reflect upon their practice through the planned opportunities within the programme [24].

A small sample of self-selected students was involved in the next cycle of research which included a case study of two individual students. Moon suggests there are 'identifiable skills and processes that may be part of critical thinking' and although

teaching these skills is not necessarily the way the activities of critical thinking are learnt [16]. A series of workshops looked at the development of listening skills and the use of Socratic questioning to guide discovery; to gather information, to define issues, scrutinise different perspectives, move from the concrete to the abstract, and evaluate and construct a new idea. An essential part of this guided discovery is the ability to listen for the unexpected, the idiosyncratic and the emotional response [17].

Students then entered an assessed teaching placement where they were asked to record discussions with their mentors during assessed lesson observations. Students were encouraged to analyse their listening and questioning skills over time and reflect upon the development of their thinking.

It was also intended to organise workshops where students developed these skills alongside mentors from schools.

## 6. Initial findings

From the two case studies, it was evident that the students valued having time to think and talk about their experiences on the programme. It was felt that this was not always possible due to the heavy taught content, which could sometimes average 20 hours each week. Students tended to focus on the practicalities of teaching [2] and preparing for their forthcoming placement, rather than reflecting upon their own learning as a beginning teacher. Students also felt that there was little or no support for themselves as learners: documentation for school placements tended to be more concerned with administration tasks for mentors.

Reflecting upon the findings from the two case studies, it appeared that the programme was sub-consciously driven by content rather than enquiry. The standards agenda had taken hold and it was felt that tutors' modeling of reflective practice was ineffective.

## 7. Implications

A review of the curriculum began with a focus on the professional modules. The teaching team began to ask questions of their own practice and identify the values they held of the PGCE students.

A further supporting tool for students was developed in the form of a continuum of experience which was shared with the new cohort of students and colleagues in other universities.

A discussion of the nature of enquiry-based learning has begun within the teaching team.

## 8. Conclusion

The programme team have begun to develop their thinking further and are beginning to make positive and hopefully effective changes to the taught professional modules. The current cohort will be invited to discuss their learning journey on the PGCE programme through individual interviews at the end of their programme. The focus of these interviews will be based around the enquiry-based learning teaching strategy and how this may have helped students to become autonomous, reflective teachers, ready to embark upon their NQT year. The next concern within this ongoing action research cycle will be how to work alongside school mentors in order to develop opportunities for students to reflect and enquire during their time on teaching placement.

This research is at the re-planning stage of the action research process and continues to raise further questions of our own practice as teacher educators.

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## **Session 29: Cross-disciplinary Areas of Education**

The Present State of Turkish Monolingual Dictionaries for Children: Is there a Certain Dictionary Design Manual to Follow?  
(Duygu Aydin)

National Bilingual Teaching Demonstration Course Construction and Discussion  
(Sun Zhao-Yun, Wei Na, Jiao Li-Nan)

An Exploration of the Effectiveness of the University of Limerick Graduate Diploma in Guidance and Counselling; Using Past Experiences to Inform Future  
(Jennifer Liston, Tom Geary)

Towards Designing an Advanced Full Interactive Web Based E-Learning Courses for the Orientation Engineering Courses at Umm Al-Qura University  
(Hamza A. Ghulman, Mohammed W. Al-Hazmi)

# The Present State of Turkish Monolingual Dictionaries for Children: Is there a Certain Dictionary Design Manual to Follow?

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## Abstract

*When compiling a dictionary, the ultimate goal is to meet the needs of the target users and to present the information according to their language, and cognitive accomplishments. This process requires an in-depth realization of the variables, especially when the target users are children. Although there are Turkish monolingual dictionaries compiled specifically for children, these dictionaries lack the basic principles of cognitive, developmental, and linguistic variables. These shortcomings bring up the aim of this paper, namely, the necessity of having a basic dictionary design manual. The present state of monolingual Turkish dictionaries for children is thus put forward to demonstrate such necessity. Five randomly chosen dictionaries are examined in relation with the microstructure and the aforementioned variables of seven and eight year-olds. Based on the background information and the outcomes of the examined dictionaries, the goal is to bring awareness to the importance of having a basic dictionary design manual.*

## 1. Introduction

In Turkey, it seems as if for the dictionary compilers, target users do not differ among each other according to their motor skills, cognitive abilities or purpose of using a dictionary. It is possible to reach this generalization by glancing at the dictionaries available in Turkey; regardless of which category (children's, adults', learners', monolingual, bilingual, etc.), almost all share similarities in outline: Non-systematic circular definitions all printed in black and white with the same type size (9-10 points) and lacking any kind of illustrations.

Such matter brings up Svensén's [1] point of view:

"The fact that dictionaries intended for children have to differ considerably from those for adults is really self-evident. Children are less able to make use of a

complicated format ... a dictionary for children must therefore be not just an abbreviated dictionary for adults."

Therefore, it is reasonable to state that the aforementioned situation leads to inadequate use of present Turkish monolingual children's dictionaries. This brings forward the necessity to emphasize that "to be successful, lexicography as dictionary making requires careful planning and implementation of the compilation process on the basis of market research and the specification of the potential users' reference needs to be met and the information categories to be provided" [2].

Therefore, the core aim of this study is to demonstrate the importance of having a basic dictionary design manual for specific target-users. It is believed that having certain manuals will bring unity in also course materials and their outcomes will have a positive influence, especially in primary school education.

For this reason, in order to provide a general frame of the intent in a narrower sense, the present state of the Turkish monolingual children's dictionaries is put forward. Such state will give the perspective in bringing standards to course material designs.

Before constructing a proposal on the present state of the children's monolingual Turkish dictionaries, five out of more than ten dictionaries available in bookstores, were examined. Background information hold light to what is expected when designing a monolingual dictionary for children of the ages of seven and eight years. The outcomes of such comparison will bring up the shortcomings of these dictionaries and will establish the basis of the principles to be considered when designing the microstructure of a monolingual children's dictionary.

## 2. Background of the Study

Dictionaries currently available for primary grades are not found to be adequately addressing to the level

of needs for those ages. They rather lack the proper perspective of perceiving and comprehending the real world from their point of views.

## 2.1. The child

The primary school education in Turkey continues for eight years. For this reason, the lexicographers prefer to compile children's dictionaries for a broad range of target users of the ages from seven to fourteen years. Although such a range brings up many user variables to take into account, these do not seem to be of much concern for the Turkish lexicographers. As described by Swanepoel [3], user variables consist of

“users’ referential skills, their ability to detect and determine their lexical need in specific communicative situations, their linguistic competency, their ability to infer and process information provided in dictionaries and their ability to apply this knowledge in various communicative and learning tasks, their learning and cognitive styles and their preferences for certain dictionaries when experiencing their lexical knowledge.”

Within the same respect, as previously mentioned, children's dictionaries should definitely not be an abbreviated form of the adults' dictionaries. Consequently, it is essential to realize that simplifying the language of an adult would not give the language state of a child, “children are not the miniatures of adults” [4]. In relation with this point of view, although in the same stage, the concrete operational stage, abilities of a child from the ages of seven to eleven years are stated below to reflect the significance of age difference [5]:

Age 7 Improving motor control helps writing skills; can usually print several sentences; begins to tell time; losing tendency to reverse letter (b, d)

Age 8 Motor control continues to improve, aiding both printing and writing; understands that words may have more than one meaning; produces all sounds; begins to recognize nonliteral meanings.

Age 9 Little difficulty in telling time; writes well; sustains concrete story topic.

Age 10 Describes situations by cause and effect; can write lengthy essays; likes mystery and science stories; acquires dictionary skills, possesses good sense of grammar.

Age 11 Comprehends if and though; moves to abstract definitions; sustains abstract topics.

When reading, the eye bounces, pauses, returns, and re-bounces in different lengths of time, due to its anatomical structure. This has great influence on the child when learning how to read and write [6]. For this instance, the layout of a dictionary is of great significance. It is suggested that the layout of the type and the distribution of print and space should be such

that the reader reads easily; such factors clearly affect the legibility of the text [7].

In order to provide a legible text for the young target users it is apparently necessary to consider their physical accomplishments. In awareness of such necessities, Turkey's Ministry of Education published in 2005 a document of terms for course materials to be used in primary schools. This document of terms [8] sets forth the matter to use a certain type size according to the age of the target users. According to this standardized specification, 20 points for primary first grades, 18 points for second grades, 14 points for the third, 12 points for the fourth, 11 points for the fifth, and finally 10 points for higher grades are to be conformed to.

Another factor for legibility is the type style/font of the text. Bruderlin [9] suggests serif fonts, such as Times, Palantino, Courier and Bookman, to be generally considered more readable because the serifs help the eye to run along the line of the text.

## 2.2. Microstructure for children's dictionary

The microstructure of a dictionary is “the structure of the individual dictionary entries: their various parts and the mutual relationship of these. It also includes the typographical conventions.” [1]

An individual dictionary entry begins with the headword and continues with the followings: the part of speech, pronunciation, subject label, definition, related word, illustration and word history. Some information may not take place in a dictionary, in accordance with the user variables and the type of the dictionary.

Definitions of a dictionary are the backbone of the dictionary. No matter how attractive the outline of the dictionary is, if its definitions do not serve well enough for the target user, it loses its mission. Therefore, it is important to plan the compilation of the definitions carefully. That is, “all words within a definition must be explained, the lexical definition should not contain words more difficult to understand than the word defined, and the defined word may not be used in its definition.” [10]

The target users are children of very little interactive real world experience when compared to adults. For this reason, it is necessary for the lexicographer to remind himself that his target user has his own language and life experience that differ from an adult's. With this realization, it is easier to reach out to the young target users and guide them throughout their dictionary use. If the lexicographer wants to minimize vagueness, he must avoid circularity among the definitions he provides.

Verbal examples and illustrations, which the user has the task of building up a mental representation of

the meaning of a lexeme from the information provided by these descriptive devices are the other major tools lexicographers use for definition [3]. Another reason to draw attention to such matter is that, “a picture can show many more typical features of what is to be described than are normally included in a definition” together with it being “effective in representing certain types of spatial, temporal, functional or other relationship in various conceptual relationships” [1]. Therefore, when the definition consists of life knowledge or abstract information, it is best to provide an illustration supporting a simple definition instead to help the young target user to comprehend.

### 3. Method

The core aim of this paper is to bring awareness to the importance of having a basic dictionary design manual. Therefore, to set forth a solid ground, the present state of the Turkish monolingual children’s dictionaries is examined. Such examination takes place in a comparative manner with background information.

Out of more than ten Turkish monolingual children’s dictionaries available in bookstores, five of the following were randomly chosen. Each of which will be referred to as ‘Dictionary A’ [11], ‘Dictionary B’ [12], ‘Dictionary C’ [13], ‘Dictionary D’ [14], and ‘Dictionary E’ [15].

The age of this study’s target users varies from seven to eight years. In addition, the high possibility that the children will be using it for the first time is also considered. Hence, aspects will be discussed accordingly.

Discussed aspects will be supported with examples from the sample dictionaries to draw a solid picture of the intention.

A model design will not be provided as the core aim of this paper is to draw attention for further studies of such matters. Instead, this paper will try to demonstrate the reasons of the necessity of having a basic dictionary design manual.

### 4. Application

Among many lexicographic principles, the microstructure of the dictionaries is taken into consideration. Such consideration is dealt through the basic principles of cognitive, developmental, and linguistic variables of children at the ages of seven and eight years. This provides comparing the five sample dictionaries accordingly.

The typological conventions should be considered according to the target users’ motor skills and physical accomplishments in order to provide legibility. Just by

their sizes, neither is bigger than an adult’s hand; give an idea of their present state; leaving the child to struggle turning the little pages with his small fingers and not interested in reading any part of it as the type style and size are not as suggested by various education and lexicography sources.

The headwords of the sample dictionaries are in this manner: In dictionaries A [11] and E [15], although the headword is the same size of the definition, it is in black bold. In dictionary C [13], it is in black bold and one point size bigger than the definition. In dictionaries B [12] and D [14], the headword and the definition are the same point size; however, the headword is in color bold. It is important for the target user to find the word he is looking up easily, therefore, headwords should differ from their definitions.

Neither of the sample dictionaries provides the syllabification of the headword. Syllabification of the headword, however, is crucial because the target users are learning how to read and write. The headwords can be on the left hand side of the column whereas their syllabification can be on the right hand side in one point size smaller and bold, within squared brackets and raised dots among the syllables.

The translated definitions for ‘calcium’ in the sample dictionaries are as follows; Dictionary A [11]: A substance found in the combination of lime and plaster. Dictionary B [12]: A yellowish white element found in the combination of lime and plaster. Dictionary E [15]: A yellowish white element that is in the combination of lime and plaster that melts at 800C°and, has the density of 1.55, its symbol is Ca. Dictionaries C [13] and D [14] do not provide a definition for ‘calcium’.

The target users, as mentioned earlier, have limited life experience when compared to adults and even older children. They will not have science subjects before primary fourth grade. For this reason, it is necessary to provide the definition according to their life experience. As a result, the definition for ‘calcium’ could be; “it is a mineral in our body, which keeps our bones hard and strong. Most of the calcium in our body is stored in our bones and teeth. Milk, cheese, and yogurt are foods that are the best source of calcium” [16].

The verbal illustrations of the sample dictionaries do not provide help because there contains either circularity or it is vague. For instance, dictionaries A, B, D, and E do not provide a verbal illustration for the headword ‘optimistic’. Dictionary C provides ‘Ayşe is an optimistic friend’ [13]. Hence, it is important to remember that verbal illustrations are to serve as back up support when the definition is not possibly clear enough for the young target user to understand.

When the target user's life experience is too limited to understand the definition the illustrations come to the rescue. For this reason, illustrations are as important as definitions. Thus, only dictionary C [13] provides a grayscale illustration of a tulip. On the other hand, the other dictionaries do not provide an illustration but only a definition instead, such as, dictionary A [11]: A decorative plant that has flowers like a wineglass. Dictionaries B [12] and D [14] provide the same definition for 'tulip': A decorative plant with long leaves and of flowers like a wineglass in various colors. Finally, dictionary E [15] defines as follows: A decorative plant with long spear-like leaves and of flowers like a wineglass in various colors.

There is a high possibility of the target user to visualize a colored wineglass that has a spear on the other end with leaves coming out of everywhere if he has never seen a tulip before. To avoid such misunderstanding, instead, providing a colorful photograph of the tulip would help both the dictionary-compilers and the target users.

## 5. Conclusion

Compiling a dictionary, in Turkey, is not a collective project carried out by a group of professionals. Instead, it is a one-man research. A research that leads the dictionary being far from sufficient on lexicographic grounds and which generally underestimates the user variables. Such situation should bring realization to the present state of the Turkish dictionaries. Most importantly, it should bring realization to the necessity of having a dictionary design manual to be followed worldwide.

Five Turkish monolingual children's dictionaries were chosen randomly out of more than ten dictionaries available in the bookstores. The reason was to examine them comparatively, on the microstructure ground in relation with the children's abilities, to put forward the present state of the dictionaries. The outcomes of the comparison brought up the shortcomings of these dictionaries. The outcomes created the basis of the principles to be considered when designing the microstructure of a monolingual children's dictionary.

The core aim is to point out the fact that when the time has come to sit down and decide on the design of the dictionary, there is not a certain dictionary design manual to follow. Certain resources provide solid information on 'how to' design which aspect according to what. However, it is unfortunate to admit that trying to gather information on such matter from here and there leads to uncertainty, time-loss, and lack of unity. Therefore, it is essential, to have certain dictionary design manuals according to certain target-users. Such manuals can be created in cooperation with a group of

experts and according to the language, cognitive and developmental variables of the target users. Such awareness will bring forward further related studies.

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# National Bilingual Teaching Demonstration Course Construction and Discussion

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## Abstract

*According to the experiences and ideas in the processing of national bilingual teaching demonstration course construction in Delphi computer high-level programming technology, combining with the features of computer major in information discipline, that is, "object-oriented program design" bilingual teaching, the paper analyzes the relationship between bilingual teaching and international innovative talents' cultivation and the key factors influencing the quality of bilingual teaching, as well as the methods and characteristics of bilingual teaching in computer specialty. The paper proposes effective measures and specific construction schemes in improving the quality of bilingual teaching.*

## 1. Introduction

Under the new situation of China's entering into WTO, internationalization has become a major criteria, which embodies the quality of running higher education institutions. As China needs a number of senior technical personnel who are equipped with international insight, a mastery of commonly used language in international communities and relevant professional knowledge. Ministry of Education stipulated some views on strengthening undergraduate teaching work to improve the teaching quality of high education in 2001. The document demanded that higher education institutions should actively carry out the measure that English should be used in common and specialized courses in bilingual teaching. At the same time, in some views on further deepening undergraduate teaching reform to improve teaching quality in an all-round way issued in 2007, Ministry of Education further made definite requirements that higher education institutions should play an active role in inviting foreign scholars and experts to conduct

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bilingual teaching for specialized courses. With these measures, it is hoped that China's higher education will keep pace with the international world.

## 2. Literature Review

Bilingual teaching is a systematic project. According to the years-long practice of conducting bilingual teaching in computer subjects in the Information School of Chang'an University and the analysis of feedback from the students, we can infer that teachers, the foundation of students, the bilingual textbook, teaching resources, teaching methods and instruments are all crucial factors, which will have an effect on the quality of bilingual teaching [1]. Among them, good college English teaching, English teaching of Computer science and research, development and application of multi-media courseware will guarantee the successful enforcement of the bilingual teaching of the specialized courses, and also will play a crucial role in improving the quality of bilingual teaching of the computer science in Information Technology [2], [3], [4].

## 3. Analysis of Findings

### 3.1. The Building of a High-level Faculty of Bilingual Teachers

Building a high-level faculty of bilingual teachers is a prerequisite condition for guaranteeing the quality of bilingual teaching. A teacher's specialized knowledge and competence of English and Chinese are essential elements for successful bilingual teaching. Besides, bilingual teachers are qualified with application capacity in many respects, such as the comprehensive application of the specialized knowledge, the making and application of modern multi-media teaching courseware, well communication, strong control of the teaching process and the innovation ability of teaching methods. In the last two years, though there has been

many young college teachers with doctor's degree introduced into the Information School, those who had the experience of going abroad for at least a year or majoring in English are quite few. On the other hand, part of the young teachers are excellent in English, but they do not have solid specialized knowledge. In view of this situation, the studying team feels that there is a shortage of bilingual teachers and a need of training compound teaching staff in English plus major.

### **3.2. Selection of Bilingual Textbook and Utilization of Teaching Resources**

It is a guarantee to select bilingual textbook and utilize teaching resources for conducting computer course.

There are a number of advantages of good foreign original edition of textbooks, which can be introduced directly and indicate the latest development of the subject:

- The textbooks are featured with standard English, new ideas and choice of frontier of computer science and latest research results.
- The textbooks are very practical and rapid in renewal of knowledge.
- We can draw some lessons from the original textbooks, especially the modern teaching ideas and advanced teaching methods and instruments.

As there are plenty of cases in the original textbooks, students can study the cases to improve their ability to analyze and solve problems and apply specialized knowledge into the practical study and development of applied systems in a flexible manner. However, it is obviously that there are a lot of disadvantages:

- The original textbooks have strong practicability with a number of various cases. As a result, they have more contents and pages.
- Because of the differences in logic of textbook compilation, the foreign textbooks are superior in the active thinking and extensive knowledge. Compared with domestic textbooks, however, they are divergent, not well-organized and systematic
- If we choose the original textbooks, it is very difficult to find supporting Chinese Guide for computer experiment.

We are very cautious in textbook selection. The teaching teams should study the original textbooks extensively, choose the appropriate ones for the undergraduate students majoring in Computer that are in accordance with the requirements of teaching hour and arrangements, so as to improve the quality of the textbooks.

As for the textbook selection, the study team have chosen the original textbook ---Mastering Delphi6.0

written by Marco Cantu, which represents the latest development of computer science. According to the teaching hour requirements for undergraduate students, we adapted the original Mastering Delphi6.0 to Essential Delphi. Using it as teaching material for eight years, we felt that it was more appropriate for students not majoring in computer science in bilingual teaching. For students majoring in computer science, electronic information and communication engineering, it seemed to be a little bit easy without much advanced programming skills and applied programming cases. Considering this, the study team chose the Mastering Delphi7.0 as the reference and selected some chapters to compile the teaching materials again. That is how the Delphi Advanced Programming Technology come into being.

### **3.3. The Improvement of Teaching Methods and Means**

The lesson is conducted through a combination of flexible teaching methods, examination methods and multi-media teaching means.

We adopted the elicitation methods, discussion, a combination of Chinese and English and interactive teaching methods, alongside with such teaching means as CAI multi-media visual teaching methods, typical case study of applied systems and networking in the teaching atmosphere, thus coordinating traditional blackboard teaching with modern multi-media teaching means and realizing the flexibility, variety and three-dimensional effect of bilingual teaching forms.

In actual classroom teaching, we mainly lecture in a combination of Chinese and English. And the teaching methods are enlightenment-oriented and interaction-oriented. The key to enlightenment-oriented method is to give inspiration to students, train them to think in English; cultivate their creative thinking and turn the traditional way of instilling knowledge into education of enlightenment and interaction. The interaction-oriented method requires that teachers should lecture computer language in English and at the same time provide computer and Delphi system development platform. When the teacher is lecturing, the students can operate as required and finish correspondent programming requirements. Then the students and the teacher can interact with each other. The teaching results are better in a computer lab than in a multi-media classroom, because in the computer lab what the teacher has taught can reflected by the students' ability to solve a problem or explore new knowledge independently Teachers can create a completely new English thought environment and interactive teaching environment by directing students to write a program and debug it.



As much attention is paid to the students' creative thinking and ability, we have integrated the undergraduate comprehensive curriculum design with the teachers' research program. The students are inspired to do independent thinking. Then students' comprehensive ability in problem solving, flexible mind and creativity can be improved.

The features of methods and means of the bilingual teaching in this subject can be summed up as follows:

- The teaching of enlightenment and interaction is conducted by a combination of multi-media, bilingual teaching and practical teaching.
- In the class, the key and difficult points and some theoretical contents are discussed in either Chinese or English, which improved the training of creative thinking and ability.
- Much attention is paid to apply the cases of computer applied system development in the original textbooks to the bilingual teaching in the class, so students can practice in the computer when they study in the computer room.
- Some specific chapters are taught by means of traditional blackboard handwriting and modern multi-media technology. The latter can make the boring contents vivid, directly perceived through the senses and easy to understand.
- In networking teaching atmosphere, a bilingual teaching subject website is built. It can enrich the teaching resources, expand students' knowledge and improve the quality of bilingual teaching.
- The comprehensive examination is adopted either in Chinese or English, among which written and oral exams will account for 70%, and computer experiment will take up the other 30%. The comprehensive exam will emphasize the students' practical applied ability.

#### **4. Contribution to knowledge**

##### **4.1. Strengthen International Communication and Improve the Quality of the Teachers**

On one hand, we can invite some influential experts and well-known professors in this field from abroad to conduct academic exchange and bilingual teaching. On the other hand, we can select and send some excellent young teachers for studying abroad, who can learn the latest academic achievements of the subject and master recent developments in science and technology. The measure can help improve the quality of the bilingual teaching faculty.

##### **4.2. Reorganize and Improve Original Textbooks and Elevate Teaching Ideas**

The original textbooks have both advantages and disadvantages. They are very practical, whose arrangements are favorable to the students' initiative to study and creativity. While, the domestic textbooks are very systematic, which can help students to build a knowledge system. These two teaching ideas can be complementary to each other, thus cultivating innovative talents with global competitiveness.

##### **4.3. Innovating Teaching Forms and Means, Improving the Quality of Teaching**

The innovation of teaching forms can start from selecting appropriate original textbooks according to the students' English; then we can choose different ways of teaching according to the difficulty of each chapter.

- Use the original textbook and teach it in Chinese.
- Use the original textbooks and teach it in both Chinese and English.
- Use the original textbook and teach it in English.

The innovation of teaching ways can be realized through multi-media technology in bilingual teaching, which can produce direct and visual results and get students immersed in the Delphi computer language of actual applied system environment[5]. Then the teacher can teach in both Chinese and English or completely in English. Also the teacher can replay some teaching video to provide more explanation or additional remarks about some key or difficult points. Meanwhile, students should be given some time to think or operate in the computer, which can make the teaching results better and students can be more capable in operation.

##### **4.4. Build and Refine the Bilingual Teaching Management System**

To build a perfect teaching management system, is to standardize bilingual teaching and ensure the quality of it, and guarantee the successful implementation of teaching reform.

- Institute a set of incentive mechanism of bilingual teaching

In the document [2001]4, the Ministry of Education has set definite requirements for bilingual teaching. What's more, the evaluation system of undergraduate teaching under way has listed the bilingual teaching as one of the important indicators to evaluate teaching reform of institutions of higher education. To promote the development of bilingual teaching, our university has set counterpart funds to support, monitor and manage bilingual teaching. At

the same time, we have instituted corresponding incentive policies and mechanisms.

- Decide on bilingual teaching criteria

The institutions of higher education should set distinct stipulation for the bilingual teaching's textbooks, curriculum, homework and examination and so on to avoid conduct bilingual teaching casually and aimlessly.

- Decide on the faculty of bilingual teaching

The department responsible for the bilingual teaching should identify the qualification of the bilingual teachers. It is a prerequisite of the successful bilingual teaching.

- Set a mechanism to monitor and evaluate bilingual teaching results

The colleges and schools should set up a team to monitor the quality of bilingual teaching by means of sitting in on a class regularly, sending out questionnaires to students and organizing a forum for the bilingual teachers and their students. These measures can reflect the problems of the bilingual teaching and evaluate its quality.

- A reasonable arrangement of bilingual teaching system

Considering the present English level of undergraduate students in the School of Information Engineering, it is very necessary to arrange the bilingual curriculum in a reasonable manner. Before the implement of bilingual teaching, the college English teaching should be strengthened. Besides, the professional English and selected readings of foreign language materials should be taught in English. These can be a preparation for the bilingual teaching of professional courses and teaching effects can be achieved. A reasonable regulation of the curriculum and addition of bilingual teaching hour of professional courses can promote the bilingual teaching quality.

## 5. Conclusion

After years' practice and exploration, the Delphi Computer High-level programming Technology offered by the School of Information Engineering in Chang'an University has become one of the National Quality Project bilingual teaching demonstrative course. In recent years, the school has invited Dr. Chang Xintai, a Chinese American and the computer expert of American ADOBE software company, Tenure Professor Zou Lihe in Louisiana Tech University and Tenure Professor Che Dunren in University of Southern Illinois University and so on to teach this course and give topic lectures for the undergraduate students, which have won the warm welcome from the students. These foreign teachers' demonstrative lectures have imparted advanced teaching ideas and experience and injected new energy into the bilingual teaching. The teaching team will take the National Quality Project bilingual

teaching demonstrative course as a turning point, build a faculty with solid foundation, high vocational level, creative ability and pioneering spirit. We will push the bilingual teaching reform in a sound and effective manner and promote the bilingual teaching quality of computer courses of the Information Subject.

## 6. Future work

The curriculum group will construct the national bilingual teaching demonstration course in a well-planned and progressive manner with some focus. The plan is as follows:

- Much attention will be paid to promote the teaching faculty, especially their ability of high level programming technology and English.
- we will explore actively the improvement of bilingual teaching methods We will focus on the textbooks, teaching effects and the feedback of teachers and students to improve the teaching quality constantly.
- We will develop in an all-round way the multi-media software, and integrate teachers' rich experience and programming skills into it, along with vivid, visual video to teach.
- We will enhance the training of computer comprehensive design experiments. Teachers will put an emphasis on students' practical ability and create conditions for students to carry out a comprehensively designing and creative experiment.
- We will further reorganize and develop the network teaching resources of the subject and improve the website building, thus both teachers and students can make use of the website platform to guide, answer questions and correct schoolwork.
- According to the requirements about promoting bilingual teaching proposed by the Ministry of Education in the Quality Project, we will build this course an excellent national bilingual teaching demonstration course.

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# An Exploration of the Effectiveness of the University of Limerick Graduate Diploma in Guidance and Counselling; Using Past Experiences to Inform Future Practice

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## Abstract

*In Ireland the role of the guidance counsellor is complex and challenging. The education guidance counsellors receive is central to preparing for the guidance counselling role. This paper provides a review of an exploration into the effectiveness of a guidance counsellor education programme. Of particular relevance to this paper is an aspect of the research which explores findings from a questionnaire distributed to 234 graduates from the University of Limerick Graduate Diploma in Guidance Counselling. Firstly, the background of the research will be presented, followed by a description of the model utilised during the analysis of the questionnaire. The questionnaire findings will be discussed and finally conclusions will be drawn.*

## 1. Introduction

At the National (Ireland) Guidance Forum the 'Guidance for Life' report was launched. In this report it suggests areas for improvement in order to enhance guidance services. One such suggestion it lists is to ensure that people working in guidance are well-trained and supported, with proper quality assurance procedures in place [1].

When observing the Irish guidance and counselling context, the Education Act (1998) states that a school shall use its available resources to ensure that students have access to appropriate guidance to assist them in their educational and career choice. Today the role of the guidance counsellor in Ireland is central to the whole guidance service which pupils receive. The various roles which the guidance counsellor undertakes are listed by the National professional bodies for guidance counselling in Ireland namely, The Institute for Guidance Counsellors (IGC) and the National Centre for Guidance in Education (NCGE). Listed among the roles are counselling, support, assessment, information, classroom guidance activities, planning and organising workshop learning, referrals and professional development.

A recent study for The Economic and Social Research Institute in Ireland looked specifically at guidance provision in second-level schools. This study documented how schools varied widely in the nature of the guidance counsellor's role [2]. This study observed how variation existed in terms of the range of activities of the Guidance Counsellor and the balance of time spent on the areas of career guidance, educational support and personal support. Literature has been examined closely to determine an explanation for such variation. McCarthy suggests that the priorities which Guidance Counsellors attach to their work tasks appear more a function of the particular type of training they have undertaken, they may not necessarily be a function of client's needs [3]. Programmes such as the University of Limerick Graduate Diploma in Guidance and Counselling have a significant effect on the nature of the guidance counselling service which people receive. The guidance counsellor education programme subject content and methods used to teach the content influence Guidance Counsellors not only during their participation in the programme but throughout their career and consequently the people they deal with. The aim of this research is to observe if the type of training offered by the University of Limerick programme is in fact, influencing the service graduates provide. Furthermore an objective of the research includes investigating the University of Limerick graduates in areas such as, the reasons underpinning the high demand by teachers applying and wishing to study this programme, the career paths of graduates, the impact of these Guidance Counsellors on post primary education and adult guidance and the continuing professional development needs of these graduates.

## 2. The Development of Guidance and Counselling

To begin any attempt to move toward an understanding of the effectiveness of a guidance counselling education programme, a basic understanding of the development of Guidance Counselling must be outlined. Although it is beyond

the scope of this paper to present a comprehensive review of the literature on the development of Guidance Counselling, points can be summarised under the following headings; 1. The influence of pastoral roles, 2. The influence of religious roles and 3. Responding to the client needs. As McLeod puts it, to understand what counselling is, and what counsellors do, it is necessary to have an appreciation of the historical origins and development of this form of helping [4]. Baker and Gerler describe how what we think of currently as school counselling did not begin with a formal design consisting of established goals, assumptions, and functions. It evolved to what it is today [5].

Baker and Gerler describe how responding to local needs was the main influence when initiating guidance type services. Parsons, Beers and Freud influenced the development of school counselling in the early years of the twentieth century in the United States by responding to the needs of the students they taught. This led to a growth in the 1920's and 1930's of the number of guidance teachers in schools however as Baker and Gerler note how no widely accepted standards for training or practice existed [5]. As a result what emerged as the dominant school guidance model was described as trait and factor, or directive guidance which promoted enhancing normal adjustment, goal setting and assisting individuals to achieve satisfying lifestyles. Counselling included analysis, synthesis, diagnosis, prognosis, counselling, and follow-up and techniques for forcing conformity were recommended. The directive approach to guidance ultimately proved to be too constricted. This was not the ideal situation, as the need for personal counselling during War times was at a high point in the United States, it was however the beginning and it led to improvements throughout the guidance and counselling service in the United States. Most significantly, Post World War II the work of Carl Rogers, which emphasised the counselling relationship and climate, gradually emerged as the dominant guidance function in the 1930's and 1940's. Baker and Gerler describe how Rogers influence had moved school counsellors away from being highly directive towards being eclectic [5] during a time (1960s) described as the boom era in United States. Some of the great theories with regard to guidance and counselling are formed as a result of theorists systematic response to peoples needs be it psycho-social needs, goal setting needs or the need to be listened to. New roles for guidance counsellors have been devised over time. Baker cited in Repetto et al, [6] describes how the role of guidance practitioners is defined according to the tasks they carry out, and as these tasks change over time, counsellors must be prepared to exercise many different professional roles. Today guidance counsellors work in an environment which has

accumulated a vast number of theories on guidance counsellor competency, career development and counselling theories. Repetto [6] explains that based on increasing globalization, societal changes and technological changes there is a need to improve the initial and continuous education of guidance counsellors. However Repetto does state that there is little agreement on the type of training counsellors must receive in order to provide these services.

### 3. Research To Date

Research to date has established that implementing the Guidance Counsellor education programme is a complex task. Presently one can observe the international variation in guidance counselling education programmes and the variation as to who decides on the programme. This in effect causes the implementation of a guidance counsellor education programme to be a multifaceted task. The complexity of the personal narrative of the course director's own experience and education mixed with the difficulty of trying to be inclusive to National policies, professional body frameworks and institutional policy is substantial. This is an ongoing issue which course leaders need to address through awareness, membership of professional guidance and counselling forums and continuing professional development [7].

It has been established that the course director's ability to be reflexive and knowledgeable in areas such as policy development, international competency requirements and client's needs significantly affects the Guidance Counsellor Education programme. Professor Van Esbroeck, [8] described how European surveys in relation to the career guidance and counselling provisions, the roles and tasks performed within the services and the training and qualification of guidance and counselling staff indicate that there exists an extreme variety. Guidance Counselling Education programmes are said to be devised with a top-down or bottom-up approach. Sultana [9] describes how both approaches have their strengths and weaknesses. A key consideration here is which strategy is best suited to ensure sensitivity towards changing roles in a rapidly changing environment. If frameworks are built around the competences excellent practitioners have demonstrated in the past, they may fail to identify evolving competence requirements unless they are up-dated regularly [9].

McCarthy [3] explains how both approaches are in existence when he describes how across countries there is wide variation on who decides the content and methodology of initial training for guidance workers. McCarthy [3] observed that in Finland it is the course directors who decide on content and methodology. In Ireland it is the course directors and

Professional Association and in the United Kingdom it is the course directors, Professional Association and the Government who influence the programme. When looking further at curriculum development in education the concept of backward mapping is significant to consider in this context. Backward mapping [10] assumes essentially that the closer one is to the source of the problem the greater is one's ability to influence it. Guidance counsellor education programmes provide graduates with the education required to address client's needs/problems. The problem-solving ability of complex systems depends not on hierarchical control but on maximising discretion at the point where the problem is most immediate [10]. With this considered the importance of the bottom up approach in guidance counselling would be suggested as the more appropriate at addressing client's needs. Findings from phase one of this research establish that a combination model of both top-down course content requirements and the course directors ability to recognise needs, influence the guidance counsellor programme. The initial research findings establish grounding for the research to further explore issues such as the influence of complexities on the quality of graduates of a Guidance Counsellor Education programme and the outcomes for graduates from participating in the programme.

#### **4. The Model**

The model used for exploring the effectiveness of the University of Limerick Guidance and Counselling programme is based on a model presented at the 2009 IAEEVG (International Association of Education and Vocational Guidance) conference. The model has been developed by the Canadian Research Working Group on Evidence-Based Practice in Career Development [11]. The model suggested for studying the effectiveness of guidance counselling is the input-process-outcome framework. Under the heading of input resources available such as, staff, funding, facilities, infrastructure and community resources are listed. Under the heading of process activities that link to outputs or deliverables, generic interventions and specific interventions such as Interventions used by service providers skills used by service providers, home practice completed by clients, programs offered by agency, involvement by 3rd parties, quality of service indicators, stakeholder satisfaction are listed. Under the heading of outcome indicators of client change such as learning outcomes, knowledge and skills linked to intervention, personal attribute outcomes, changes in attitudes, intrapersonal variables (self-esteem, motivation, independence), impact outcomes, impact on client's life, e.g., employment status, enrolled in training,

societal and relational impact and economic impact are listed.

#### **5. The Questionnaire**

The questionnaire was sent to all 234 graduates of the University of Limerick Graduate Diploma in Guidance Counselling. It consisted of both structured and unstructured questions which explored graduates experiences of the University of Limerick programme. Questions focused on gaining data in relation to the reasons graduates had for choosing to complete the programme, their career paths following completion of the programme and their continuing professional development needs. Data surrounding the priorities they attach to their work and the skills and competencies they gained from completing the course was also sought. The focus of questions developed throughout phase one of the research and also throughout a piloting process. A total of 37.3% returned the postal questionnaire. Responses to the structured questions were analysed using SPSS and answers to unstructured questions were thematically grouped in excel.

#### **6. Findings and Discussion**

The analysis of results begins by observing both qualitative and quantitative data surrounding inputs, processes and outputs to the graduate diploma in Guidance Counselling. Inputs examined include student factors such as funding and the reasons graduates chose to participate in the programme. The course context factors such as the infrastructure, communications, resources and devised programme content are examined. Process factors analysed include the learning experiences graduates had during the programme and outcome factors examined include the service and careers of graduates following completion of the programme. For the purpose of this paper the emerging theme of the effect of the personal counselling focus of the University of Limerick programme is examined under input, process and output factors and discussed in depth. It has been explained in early parts of this paper that the focus of the guidance counselling programme and guidance counselling service is an ongoing debate. Should Guidance Counsellors be providing a careers service or personal counselling service? Quantitative analysis of the questionnaire presents the following findings in relation to students input factors. A gender imbalance which shows 68.3% of the programmes participants being female is not surprising considering the nature of the programme and the fact that 82% of participants are coming from the teaching profession. With only 16.5 % of participants receiving funding or part-funding, a substantial financial commitment to the programme is evident for over 80% of the participants with one

such participant commenting on the programme being “enjoyable but damned expensive”. However many note the fact that the programme is part-time is attractive and supports their continuation in the working environment. “The part-time aspect has allowed me to stay at work”. “I was not in a position financially to take a year off to study, so the part-time nature of the course made it accessible”. In fact when you observe the reasons graduates had for participating in the programme, the location (82%) and part-time convenience (89%) rate most highly. With regard to tutor input many made comments in relation to the nature of the relationship between the tutors and students. Tutors were described as having “genuine interest in students with staff interaction positive and helpful, overall excellent”. In general comments were positive towards tutors on the course however specific negative comments did emerge. “I felt sometimes the tutors were not well enough prepared”, “high level of student interaction and good level of support from tutors”. Some negative comments emerged in relation to the administration of the programme, “administrative/organisational issues could have in some instances been better some more planning in advance” although interestingly it was the counselling aspect of the course which was noted to be most organised. “The UL programme was to a large extent very well organised and well run especially the counselling aspect.” When observing the qualitative data for process factors aspects of the programme content and methodology which aided the learning process for participants emerged. Many commented on how they liked the assessment for learning approach, “I liked that it was continuous assessment and we had no written exams” however it was also noted on some occasions that this type of assessment was quite demanding “I resented having to complete so many essays”. A small number of responses highlighted the secondary school focus of the programme as being frustrating especially when working in an adult guidance context. Following the career paths of graduates it can be observed that 60% work in secondary guidance sector and just over 15% work in adult guidance sector. This figure will be useful for course tutors to consider when preparing modules in the future.

Overall the main body of graduates reflected on the programme as a very positive experience. With many comments noting the significant outcomes of the programme, “overall a positive experience. I grew a lot personally from the programme and my professional career was enhanced greatly from doing the course” and “it was a very positive experience. The course contributed greatly to my own self-development and greatly helped me to carry out my duties as deputy principal in a more enlightened fashion”.

## 7. Input Factors

The most interesting finding is in relation to the personal counselling focus of the graduate diploma in Guidance Counselling. The personal counselling domain is openly said to be the philosophy driving the University of Limerick graduate diploma in guidance counselling. With the course prospectus stating that personal counselling is ‘afforded primacy’ within the course and with just over 30% of graduates listing the programmes focus on personal counselling as a reason that attracted them to the programme many qualitative comments regarding the value the personal counselling focus emerged. Comments included, “The personal development was excellent”, “Very strong on counselling training. I found this of huge benefit in my role as a guidance counsellor” and “Heavy emphasis in the course around the counselling side of things. Well worth doing”. The psychological aspects of guidance counselling and focus on the personal counselling dimension are emphasised throughout the course. Psychology, sociology and economics are all connected with guidance counselling programmes and practice but the extent to which each underpins a guidance counselling education programme is debated in literature widely. In the UK context Watts and Law (1996) describe how trends in the past have seen many changes in the focus of guidance counselling. Indeed as a crude generalisation, it could be argued that whereas in the 1940’s and 1950’s the careers field was dominated by psychology, in the 1960’s and 1970’s this dominance was challenged in the UK by sociology, and in the 1980’s and 1990’s by economics [12]. Guidance Counselling education programmes are easily categorised into those with psychological, sociological and socio-economic emphasis and the comments from the questionnaire such as “The course places a heavy emphasis on Counselling’ strongly confirm the existence of the personal focus in the University of Limerick programme. Chamberlain and Delaney in article entitled ‘Guidance Counselling in Irish Schools’ state that, although broad parameters were derived from theoretical models developed in the United States and Europe, it is felt that the form taken by school guidance in Ireland should meet the distinctive educational and cultural needs of Irish society [13]. The Irish guidance counselling service is among a minority of European Countries which takes a personal counselling emphasis. The breakdown of what areas guidance covers in a number of European countries is analysed in an ERSI report [2]. From the breakdown one can see that the emphasis in Europe is on the Vocational and Educational guidance of students with few countries providing personal guidance. Ireland however is among one of the few countries that does support personal guidance. The ERSI report describes how, International work

(OECD, CEDEFOP and World Bank reports) has tended to focus attention on the nature of career guidance services operating in schools, giving considerably less attention to the more 'personal counselling' dimension of the role which has traditionally been a feature of Guidance Counselling services in Irish schools [2].

## 8. Process Factors

While many positive comments with regard to the personal focus of the University of Limerick programme existed. A minority of comments expressed a weakness to the programmes lack of focus on careers education. "I felt it was lacking with regards to developing knowledge and skills in the career area/ subject choice area and the course selection area, which a huge part of the work" and "The area dealing with careers exploration and practical work regarding careers information etc. was very poor." These comments would suggest a need to improve the course in order to facilitate career education more effectively. These comments also highlight that even though the graduates are from the same education programme the counselling versus careers debate continues to exist. This suggests that McCarthy's comment with regard to the close relationship between guidance counsellors work tasks and the training they receive may not necessarily be the case. When graduates current work tasks were explored it was found that providing an information service was the task most often required followed closely by providing a counselling service. Consequently it may be the case that the course director and course team would reconsider the amount of time spent on the counselling aspect of the course to allow for more careers education. However this is a consideration which needs to be looked at carefully as qualitative comments from graduates lack clarity in relation to this debate. On one hand comments such as....

"...the content covered over the two years of the course is far too much for a graduate diploma other graduate diplomas have much less contact for the same qualification. The counselling content in terms of hours and personal counselling is far too heavy. This means the course lacks balance."

On the other hand....

"...when I embarked on the programme I was very much aware of the time given to counselling as part of the course. However in stepping into the 'careers' class I felt very much in the dark. I relied heavily on others for support and spent more than an average amount of time planning

for classes. That said I still would not change the counselling aspect of the course."

Overall the counselling aspect is looked upon favourably by graduates. While some recognise a need for more careers information they also recognise that they can assess the information easily.

## 9. Output Factors

The guidance and counselling system in Irish secondary schools has recognised a climate where guidance counsellors integrate personal counselling and career counselling into the service they provide pupils. A study by the Department of Education cited in Shiel and Lewis [14] shows the involvement of personal counselling in Irish Secondary Schools. The 1985 survey of the School Guidance Committee ranked individual personal counselling as the activity in which they engaged most frequently at Junior-Cycle level [14]. In setting the context for the research it was recognised that the strength of the personal dimension in guidance counselling in Ireland may be due to the work and influence of Carl Rogers. Many similarities between the development of guidance counselling in Ireland and America also come to light when setting the context for the development of guidance counselling. In the ERSI report it states, within such 'holistic' systems like Ireland, economic commentators warn that there is a danger that career and educational guidance in schools can be marginalised within the broad concept of guidance [2]. They maintain that counsellors spend much of their time dealing with pupil's personal problems and are possibly falling short of helping pupils with educational, vocational choices and long term career planning. When analysing the output factors of the University of Limerick graduate diploma in guidance counselling it can be established that the programme views the clients graduates will deal with as clients with both personal and career needs. The University of Limerick graduate gains competencies to provide for counselling to a high standard and provide for careers information when required. "It was a very difficult programme, but in terms of personal and professional development it enabled me to feel confident in my role as a Guidance Counsellor. I felt competent in my dual role of both career advisor and counsellor."

## 10. Conclusion

This paper has given an overview of the whole research area by outlining a background to the development of Guidance and Counselling and briefly explaining the research to date. By particularly focusing on the questionnaire and presenting results and in depth element of the



research has been explored with reference to international examples. The debate continues with regard to the counselling versus the career focus of guidance counselling. The University of Limerick graduate diploma in guidance counselling prioritises the personal counselling focus while considering the need for career guidance. The final phase of this research hopes to explore this concept further using in-depth interviews in order to establish further graduate experiences of the University of Limerick programme.

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# Towards Designing an Advanced Full Interactive Web Based E-Learning Courses for the Orientation Engineering Courses at Umm Al-Qura University

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## Abstract

*Engineering E-learning interactive web based courses are playing an important role in teaching different engineering fields. Faculty members in many engineering schools are keening to develop interactive web-based courses for their students. This would enhance learning through the use of advanced e-learning educational tools based on multimedia technology systems. In an effort to develop better teaching approaches for introductory courses and higher education, engineering course materials have been developed to enhance the learning capability for local and remote students in the University of Umm Al-Qura, Saudi Arabia.*

*This paper attempts to summarise the analysis, design and implementation phases of the different interactive assessment materials using Java applets and many different E-learning packages. These educative and interactive materials some are already published and others soon through the instructor domain via the university's -learning system.*

## 1. Introduction

The Mechanical Engineering Department in College of Engineering And Islamic Architecture at Umm Al-Qura University in Makkah, Saudi Arabia has over 500 undergraduate students, and offers undergraduate courses in both Power and Production Engineering.

Within the educational objectives for the mechanical engineering department program is to provide mechanical engineers whose breadth of knowledge (backed with basic sciences, engineering sciences and new technologies) capable of working in projects with various roles (designing, conducting experiments and simulation, interpreting analysis of mechanical engineering applications and conducting academic as well as applied research), also to produce graduates capable for working individually as well as in multidisciplinary teams and to provide graduates who continually improve their skills through professional and post-graduate education, finally to produce graduates who demonstrate professionalism as well as sense of societal and ethical responsibility in their endeavors.

For many courses in the first orientation engineering courses in the department, the need to develop web-based materials for different courses is a necessity. Since the increase of number of students and the far distance for a percentage of them, makes providing interactive web-based materials are highly important. This research is collaboration between the computer engineering department and the mechanical engineering department to design and develop some web-based course materials for many courses.

## 2. Review of important concepts

The following sections review some important concepts in relation to e-learning and discuss the advantage of the java applets in engineering applications.

### 2.1. Web-based education

The new product in education that empowers the learner in every situation called web-based education (sometimes called e-learning) [1]. It is the most extreme form online education that uses streaming videos and the more advanced functionalities available in educational software and where there is no actual face to face contact between the teacher and the student [2]. E-learning system involves a systematic process of planning, design, development, evaluation, and implementation to create an online environment where-learning is actively fostered and supported. In order for an e-learning system to be successful, it must be meaningful to all stakeholder groups including learners, instructors, support services staff, and the institution [3]. There are eight essential factors for successful e-learning program [5]:

- Pedagogical,
- Technological,
- Interface design,
- Evaluation,
- Management,
- Resource support,
- Ethical,
- Institutional.

In web-based teaching, some of the cases which may be anticipated to support the learners to obtain information easily from the web are as follows [4]:

1. Web-based lectures and exercises, which do not contain any multimedia material. These are basically published lecture notes and example sheets. (Almost all departments offer such services for their students).
2. Web-based lectures or handouts which are not interactive but do contain multimedia material. This material usually contains some videos, animations or Java applets.
3. Web-based lectures or exercises that contain multimedia material of an interactive nature. Usually this works through Java applets.
4. Web-based laboratories.

## 2.2. Java Applet

Java applets are programs written in Java that require a World Wide Web (www) browser or another Java application to run. The Program standalone that is run using the Java interpreter called Java application. Both applet and applications are compiled using the Java compiler [6]. The advantages of using Java applets over existing programming environments are:

1. Java applets are accessible on the client-side, thus are faster than programs running on remote servers.
2. Java applets can interface with various forms of media formats (such as text, graphics, animation and sound) and languages (JavaScript). Applets can also interact with other applets, with programs on its host server and with HTML/XML documents on remote servers.
3. Java applets can thus provide a better user interaction.
4. Multi-platform versions of educational software are limited, and often have a strong dependency on the underlying hardware. On the other hand, users can access a Java applet using different types of architectures and Java-compliant browsers, but still all see the same information in nearly the same format.

## 2.3. Why using Java applets in engineering applications?

Public domain contains many examples of Java applets which simulate or model different university's experiments in different fields of knowledge. There are four ways at least that Java applet can be used in education [7]:

1. Informational Applets: These applets are similar to the Help files in Windows-based programs where by clicking on a tab or choosing an item from a pull-down menu, the user can obtain more information on the topic. These applets may have minimal interactivity on part of the user.

2. Concept Illustrating Applets: Such applets illustrate concepts underlying the subject. These applets should have maximum possible interactivity on part of the user.

3. Computational Applets: These applets can serve as examples of concepts being learnt as well as illustrating an occurrence. They can have the capability of user-interactive apparition of results and with a built-in graphical user interface (GUI) to make easy experimentation by manipulating various parameters which can be hard wired.

4. Evaluation Applets: Evaluation is fundamental to every learning process. To evaluate student learning progress e.g. a design of a quiz applet to implement multiple choice questions.

It should be noted that we must consider five planning aspects in the design of e-Learning courses: outcomes, learners, activities, assessment, and resources [8].

## 3. Basic Engineering Drawing Course

One of the good resulted product was the "Basic Engineering Drawing" course. One of the main aims is to design a simple, educative, and interactive interface for basic engineering drawing course. The Java Applet is the basic tool that is used in the design and the implementation stages. Interactive area is left for the student to construct one of the three isometric views of mechanical objects.

### 3.1. Java Applets in the Engineering Drawing

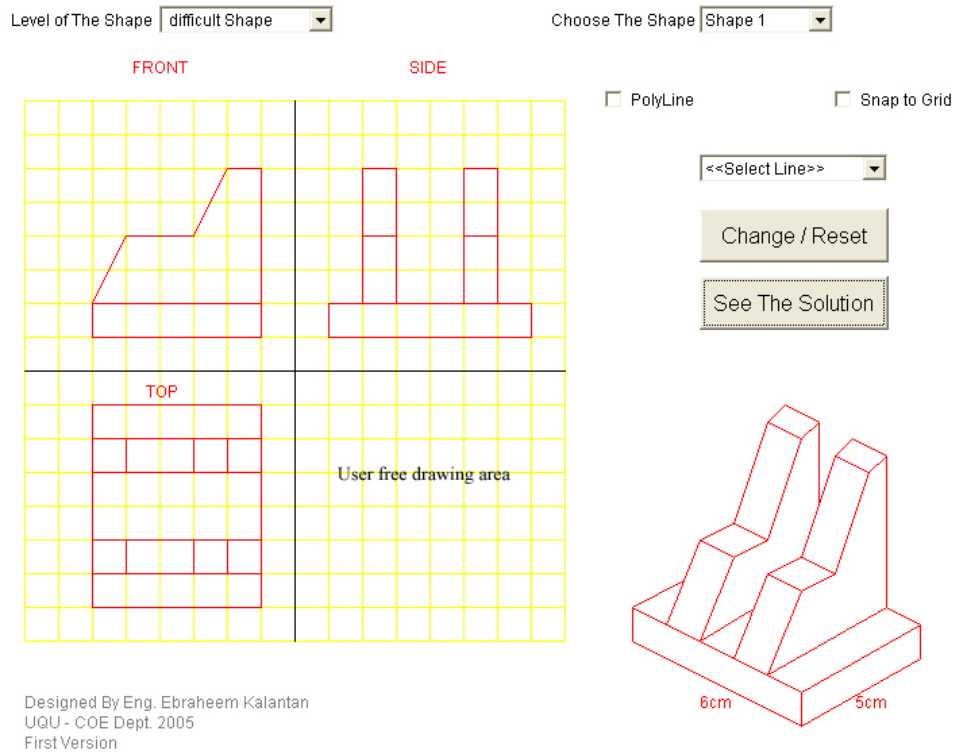
Almost all universities provide for the engineering drawing courses some drawing samples of 3-D isometric objects with their three views; the drawings are available as scanned images [9-16]. However, this will not provide any kind of interaction between a learner and the topic introduced. Using Java applet is an advantage, since it is possible to design an interactive page to allow the learner to browse, draw, or select various drawing options and settings e.g. the level of difficulty of the 3-D object, etc. The Applet is portable which means it is easily integrated with the instructor's domain or being accessible from any available e-Learning system; e.g. the blackboard system is used at Umm Al-Qura University.

### 3.2. Interactive Applet for Basic Engineering Drawing

The Figure 1 demonstrates the applet interface design for basic engineering drawing. There are two choice boxes, one to determine the level of the difficulty of 3-D object (simple, medium, and difficult) and the other to select one of the existing 3-D objects. The "Change/Reset" button is used to change the shape from level to level and to clear the

drawing area. There are three options to choose the type of line to use in drawing: visible, hidden and center. There are some options to make the drawing somewhat a little flexible, snap to grid and poly line checkbox. The button called "See Solution" allows seeing the correct solution for the third view.

To start a new drawing, a user needs to choose first type of line for drawing; hidden lines will appear in blue color. Also two options "snap to grid" and "poly line" provides two different methods to connect between drawing mesh.



**Figure 1. Computer run of the java applet to draw 3-D objects, after choosing ‘difficult shape’. The free drawing area is shown at the fourth quadrant**

#### 4. Web-Based Course for Engineering Workshop

The course is comprehensive; it contains different parts of Engineering Workshop course which includes the theoretical parts with full explanation of lessons. These materials are accessible via graphical hyperlinks through course main page, as shown in Figure 1. It is a virtual website and it is the main gate of our project through it we can use the project. The actual mechanical workshop is equipped with machines and apparatus for training the students in the fields of casting, metal forming, and machining processes. The course interface is designed by using Microsoft FrontPage program, it contains many links, buttons and services as in Figure 2.

The most important contents of the Main Page include the following:

- a) Linking buttons which are obvious and well know such as: Home, Contact Us, Learning and Downloads.
- b) General links that concerned with Engineering Workshop course and common use which are: About Us, Topics, Course Hours, Lectures, Lab and Others.
- c) Seven main links functioning the seven chapters of Engineering Workshop course, every link acts an individual chapter (See Figures 1, 2 and 3).
- d) Bilingual dictionary (English/Arabic) link, which contains terms that are used in the Engineering Workshop course.
- e) Interactive web-based assessments: each lesson ends with a link to the interactive quiz build with java applet.



Figure 2. The Engineering Workshop course interface

f) High quality video clips, DVD: each lesson ends with an appropriate video clip to demonstrate an industrial mechanical process, principle of measurements, etc.

The idea of quizzes by computer is not new, the aim of that was to find a style which attracts the student to evaluate himself through the web-based course. To implement this target, Java Applet language is chosen because it is easy to be used and it has an attractive form pictures. Another important reason is that the possibility of linking page of these quizzes with the internet. This helps the student for browsing it anytime and anywhere through a web site specialized for that.

An exam is a formal measure of knowledge and proficiency in a subject [17]. The objective of an exam is to assess understanding of certain concepts learned and to demonstrate the level of knowledge in the subject. In the new approach, the objectives also evolve that learners actually are able to construct knowledge and learn through assessment [19]. The main element in an exam is the questions. Based on the responses produced by the examinees for each question, their terms, knowledge, skills, attitudes and beliefs are measured. There are various types of questions in the exam, for example true and false questions, multiple choices, matching questions, fill-in the blank and essay questions. Each of those types has certain criteria to be tested [20].

The use of electronic exam (e-exam) is very common in this era of information technology. The core demand is not only to modernize traditional education practice by using new technologies but also to create new learning environment based on exam that provides improvements to teachers and students. It also enhances the quality of education [17]. The role of e-exam in the learning process is as vital as it is in the traditional educational system to determine whether learning occurs in individual

student. If done effectively, it can lead to better decision-making capabilities that aids in the assessment of the students learning ability and progress monitoring [18]. Examples of some of the true/false and multiple choices exams are provided in Figure 3.

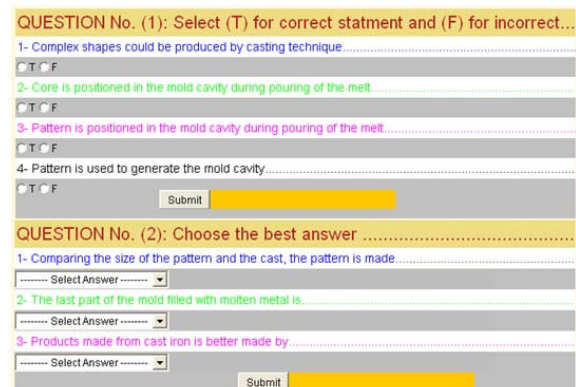


Figure 3. Examples for some true/false and multiple choices exams

## 5. Conclusion and Future Work

Many web-based materials for different courses for the first orientation engineering courses in the department have been developed. Basic 3-D isometric objects with their top, front, and side views have been demonstrated graphically using the Java applets and basic engineering workshop course. The analysis, design and implementation phases of the interactive web-based materials are summarised. The applet is used to design a user interface to for those two basic courses. The applet provides an interactive free drawing area to allow the user to draw or check one of the three missing views; top or front or side view. The educative and interactive materials are

ready to publish through the instructor public domain or via the university's e-learning system called the blackboard. Future works may consider developing the following:

- Adding more shapes at each level also and implement different types of drawing lines such as curve line.
- Provide 3-D objects Rotation.
- Adding help messages to guide the user while performing drawing tasks.
- AutoCAD may ease generating database of 3-D objects which then read by java applet.
- Provide "Re-do" to ease revising previous steps while drawing.

## 6. Acknowledgements

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## **Session 30: Curriculum, Research and Development**

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# Equity Pedagogy and Pre-Service Teacher Dispositions: A Foundation for 21st Century Inclusive Education

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## Abstract

*This study has a twofold objective as follows: (i) to illustrate the need for rethinking current approaches to equity pedagogy and (ii) to critically examine the kinds of teacher dispositions necessary for developing culturally responsive pre-service teachers who can grapple with complex equity issues that arise in practice. The theoretical context of the study is complemented by an analysis of six (6) teacher dispositions explicit in focus group interview data (4 focus groups of 5 members each) of twenty (20) pre-service teachers (Years 3 and 4) in the Social Studies Programme, Bachelor of Education Degree at the University of Trinidad and Tobago. The six (6) dispositions are: (i) a meaningful philosophy of education, (ii) commitment, (iii) inter-cultural sensitivity, (iv) social justice and equity, (v) communication and (vi) reflection.*

*The study demonstrates how a profound relationship between equity pedagogy and teacher dispositions provides a foundation for pre-service teachers to meet the global demands for 21st century inclusive education.*

## 1. Introduction

The Dakar Framework for Action endorsed a World Declaration on Education for All (EFA) in 2000. The goal was inclusive education [22]. Ninety-two (92) governments and twenty-five (25) international organizations subscribed to the view that every child has unique characteristics, interests, and abilities and “those with special education needs must have access to regular schools which should accommodate them with a child-centred pedagogy capable of meeting those needs” ( The Salamanca Statement [21]. The Government of Trinidad and Tobago subscribes to UNESCO’S definition of inclusion as: “A process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities and reducing exclusion within and from education” [20]. In this regard, the Bachelor of Teacher Education Programme at the University of

Trinidad and Tobago (UTT) has emphasized that teachers need to be culturally responsive – able to relate to diverse cultures with the knowledge, skills and dispositions to better provide equity in educational opportunities for all children [10].

## 2. Literature Review

In the literature review, the researcher has sketched the integration of equity pedagogy and teacher dispositions that can support pre-service teachers in setting the stage for inclusive practice.

### 2.1. Equity Pedagogy

Equity pedagogy exists when teachers modify their teaching in ways that bring about academic achievement of students from diverse racial, ethnic, cultural, gender and social class groups [3]. Differentiation is known as an approach to teaching in which teachers proactively modify curricula, teaching methods, resources, learning activities, and student products to meet the diverse needs of individual students and small groups of students to maximize the learning opportunity for each student in a classroom [4]. Throughout the literature of the school reform movement on “Education for All” is an appeal for teachers to adjust curriculum materials and the necessary support to afford each student equity of access to high-quality learning [19].

Of major significance, equity pedagogy requires a shift in the power relationship between “teachers and students” if students from marginalized and complex backgrounds are expected to construct their own interpretations of reality, to generate knowledge and to offer multiple solutions for creating a just and democratic society [2]. The classroom is a meeting ground of cultures where the “worlds of the students” ought to connect with the “worldview of schools and teachers” [7]. According to Gay, culturally responsive teachers use the “cultural knowledge, prior experiences, frames of references and performance styles of ethnically diverse students to make learning encounters more relevant to and effective for them” [9]. Teachers must therefore



develop cultural competence to collaborate with parents, families and communities; and learn how the cultural background of students impact upon their learning [23].

Clearly, the commitment to equity pedagogy raises serious concerns about pre-service teacher dispositions to work effectively with student populations that are becoming increasingly diverse.

## 2.2 Dispositions

The National Council for the Accreditation of Teacher Education (NATE) has defined teacher dispositions as: “The values, commitments and professional ethics that influence behaviours used toward students, families, colleagues, and communities and affect student learning, motivation and development as well as the educators own professional growth. Dispositions are guided by beliefs and attitudes related to values such as caring, fairness, honesty, responsibility and social justice [12]. Dispositional factors, then, may determine prospective teachers’ readiness (or lack thereof) [8] to learn from their intercultural and educational experiences in diverse classrooms.

Having conducted a three (3) year action research study, Bell and Thomas [5] indicated that the major barrier to any diversity professional development experience is teacher disposition regarding diversity. Teachers who encountered issues with race, social class, gender and learning styles found it difficult to understand how their dispositions toward diversity impacted upon student learning. Allard and Santoro underscored the need for pre-service teachers to: “interrogate their assumptions about class and culture and how these are played out in their pedagogical relationships with students” [1]. Research on equity pedagogy and teacher dispositions (worldviews) revealed that pre-service teachers’ perceptions of themselves may influence how they perceive others with cultural experiences different from their own [11]. The mismatch between worldviews frequently lead teachers to view children of diverse backgrounds as children with deficits as learners [24].

In recent years, educators have focused on broadening the pedagogical skill centred view of teaching and learning in diverse classrooms to include a more dispositional view [18]. Since dispositions are guided by the moral and ethical dimensions of teaching [15]; in the long dispositions may be seen as more important than skills.

Teacher education programs have a responsibility to develop in pre-service teachers the kinds of dispositions that would promote equity

pedagogy in their diverse classrooms toward the greater goal of inclusive education.

## 3. Background to the Study

Founded in 2006, the School for Studies in Learning, Cognition and Education (SSLCE) UTT, marked a significant shift from in-service diploma training to pre-service degree training for all teachers entering elementary and secondary schools. One prime objective is teacher quality for inclusive education. Trinidad and Tobago’s population comprises of: Africans (43%), East Indians (36%), White (1%), Chinese (1%), Lebanese Syrian (1%), many of whom are racially and culturally Mixed (17%) [17]. Furthermore, students belonging to different racial and ethnic groups in both denominational and government schools exhibit a range of learning abilities. The Social Studies Programme of SSLCE aims to provide pre-service teachers with an in-depth focus on equity pedagogy for inclusive education open to the cultivation of multi-cultural dispositions that support it.

## 4. Methodology

The methodology employed in this study conforms to the qualitative research tradition in education. Focus group interviews and content analysis were carried out to obtain relevant information on equity pedagogy, dispositions and inclusion in pre-service teacher education.

### 4.1. Participants

The participants consisted of twenty (20) senior pre-service teachers (Years 3 and 4) enrolled in the Social Studies Programme at SSLCE. All the selected pre-service teachers have completed Practicum Courses which facilitated field teaching at either elementary or secondary schools according to their level of specialization. The Pre-Service Practicum Courses are aligned to the theoretical based ideas on teacher education. Having taught Social Studies/Practicum Courses to the pre-service teachers over one semester (12 weeks), the author recognized the majority of them have consolidated their opinions and beliefs about teaching in diverse classrooms. When this occurs, teacher candidates are seen as developing “the dispositions to teach” [6].

## 5. The Research Question

The study focused on one question: What kinds of dispositions do you believe are important for pre-service teachers to practise equity pedagogy in diverse classrooms?

## 6. The Discussion Guide

Based on the theoretical framework of the study, the author elicited pre-service teachers' views and ideas about:

- (i) EFA in Trinidad and Tobago (multicultural diversity issues).
- (ii) Equity pedagogy (diverse classrooms, differentiated instruction, culturally competent teachers).
- (iii) Teacher dispositions (definitions, dispositions for diversity, pre-service teachers' readiness).
- (iv) Inclusive education (integration of equity pedagogy and dispositions).

The flexible format of this discussion guide allowed the author to explore, probe and ask pertinent questions.

## 7. Data Collection and Analysis

Focus group interviews were used as a primary qualitative data gathering technique. The sample of twenty (20) pre-service teachers (10 males, 10 females) were divided in four (4) groups of five (5) students each: 2 Africans, 2 East Indians and 1 student of Mixed descent. The focus group must consist of representative members of the larger population [16]. The author's objective was to gather "high quality data" in a social context where participants considered their own views in the context of the views of others [13]. Each interview session lasted 30 minutes.

Interviews were recorded on audiotape and thereafter transcribed to form a written record. The author conducted a content analysis [14] of the data derived from the four (4) focus groups. The analysis aimed to delineate trends and patterns that reappear within a single focus group or among the various focus groups.

## 8. Findings

From the data analysis, participants identified the following six (6) pre-service teacher dispositions which are actually manifested in their response to equity pedagogy and inclusion in real-life classrooms.

### 8.1. A meaningful philosophy of education

Overall the 4 focus groups felt that an integral disposition for equity pedagogy in diverse classrooms concerns their personal philosophy of education and vision. For example, many participants articulated that "all children can learn" and sought to build on this positive assumption. From their perspective, education involves a process of discovering and cultivating the unique capabilities, talents and interests that each child possesses. Education is thus a means of moving beyond the school and understanding the homes and communities children exist in and investigating socio-cultural factors that impact upon them as individual learners.

### 8.2. Commitment

A majority of participants from 3 focus groups understood that the belief "all children can learn" inevitably extends to a disposition of commitment towards an "ideal learning community." This kind of community only becomes possible when children of different gender, race and ethnic background have equal status in interactions and equal responsibility to work together and achieve learning outcomes. Thus, participants identified the need for pre-service teachers to develop an unsaid commitment to give each group, and more specifically, each child, space and voice. To guarantee equity pedagogy and inclusion, power has to be shared.

### 8.3. Intercultural Sensitivity

There was a general understanding among all group participants that pre-service teachers must become sensitive to community and cultural mores. They pointed out that children enter classrooms with identity problems, language deficiencies and different cultural codes; and hence pre-service teachers must not judge them by mainstream cultural measures but instead allow them to be themselves. Participants underlined that teachers need to demonstrate empathy, love and respect. According to one participant, "this may be the beginning point of

learning which depends upon a genuine acceptance of the learner's private world."

#### 8.4. Social Justice and Equity

In each of the 4 focus groups, participants of all racial and ethnic backgrounds (African, East Indian and the Mixed Category) stated that pre-service teachers must have the determination to teach for social justice (fairness) and equity. Participants claimed that, in many instances, inequalities in diverse classrooms do not simply emerge from issues of race and ethnic identity, but are rooted in children's socio-cultural background. Accordingly, participants drew attention to individual variation in child development (social, emotional, cognitive, physical) and modification in teaching (objectives, resources, assessment strategies) to accommodate diverse talents and give each child fair and equitable access to learning opportunities.

#### 8.5. Communication

The dispositions towards intercultural sensitivity and teaching for social justice led participants from 2 focus groups to question a dispositional focus on the cultural dimensions of communication both within and outside classrooms. They emphasized that pre-service teachers must structure interactions among culturally diverse students to facilitate powerful shared learning. Further, pre-service teachers must try to solve complex diversity issues in consultation with teachers, teacher educators, parents, community leaders and other relevant stakeholders in education. In fact, participants viewed communication with all stakeholders as they key to building a strong cross-cultural learning community in classrooms.

#### 8.6. Reflection

Participants from a single focus group reiterated that pre-service teachers must engage in reflection. They highlighted that reflective teachers can apply empirical, observational and analytical skills not only to the technical aspects of equity pedagogy but to the moral and ethical. Participants expressed a concern for pre-service teachers to rethink their own cultural perspective and interrogate the cultural assumptions underlying their beliefs, behaviours and expectations. One participant stated, "This kind of reflection can lead pre-service teachers to accept and become more sensitive to diverse cultures and the challenge of inclusive education."

Based on the findings, teacher educators may find it beneficial to consider the extent to which their

teacher education programs facilitate pre-service teachers with (i) the growth of a philosophy of education, (ii) the development of commitment to an ideal learning environment, (iii) increased intercultural sensitivity, (iv) teaching for social justice and equity, (v) opportunities to experience the cultural dimensions of communication, and (vi) training to reflect on both the technical and ethical aspects of teaching. However, teacher educators must recognize that these dispositional strengths overlap and are not separate. In addition, each diverse context demands different teacher dispositions and pedagogical skills to observe equity in classroom practice.

In summary, the 4 focus groups held a consensus view that teacher education programs must educate all teachers, those of majority or minority races/ethnic groups, to teach everybody's children.

### 9. Future Research

The Bachelor of Teacher Education Program (UTT) will need to continue strengthening pre-service teacher dispositions through structured and ongoing observation of candidates in field teaching. Dispositions are assessed in accordance with performances in pre-service teachers' work with students, families and communities [12].

Equity pedagogy combined with appropriate teacher dispositions provides a strong foundation for 21<sup>st</sup> century inclusive education. Pre-service teachers who can monitor their own pedagogical dispositions regarding equity issues in culturally diverse classrooms can reach the excellence that is hidden in each child to achieve Education for All (EFA).

SSLCE endorses the global perspective of inclusion to ensure that the school system in Trinidad and Tobago remains academically competitive in relation to the rest of the world.

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# The Peripheral Place of Rural Education in Australian Policy

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## Abstract

*This paper analyses the place of rural schooling in the Australian education policy landscape. Despite concerted policy efforts and improvements in the quality of teaching and learning, rural education still occupies a peripheral position in the policy arena. Most importantly, beyond conceptual debates around the homogeneous or heterogeneous state of rural life and schooling, this paper examines the educational policy agenda of the last three decades and demonstrates that rural school students and staff are still lagging behind their metropolitan counterparts. Finally, it argues that this peripheral position plays a prominent role in the sustainability or decay of rural communities.*

## 1. Introduction

This paper critically analyses the place of rural schooling in the Australian education policy landscape. It examines the place rural education policy has occupied in the last three decades and demonstrates that rural issues have been decentred to the periphery of policy frameworks. Special attention is paid to the issues (e.g. lower retention rates, difficulties in attracting and retaining teachers and lack of breadth of curriculum) identified by the national inquiry of the Human Rights and Equal Opportunity Commission (HREOC) [1], which it is argued are still relevant in rural schooling today [2].

## 2. Binary conceptualisations of rural education

Schooling in rural areas has usually been portrayed within the same dichotomy as rural life: rural-disadvantage and urban-advantage. Like life in rural communities, rural schooling offers advantages and disadvantages, some of these are factual and some belong to

mythological or romanticised conceptualisations.

What persists in almost any issue around rurality is a 'fixed binary opposition' – disadvantage/advantage– compared to metropolitan issues. For instance, Moriarty and colleagues argue that this is a metro-centric view that is constructed through a 'fixed binary opposition' between 'centre and periphery, progress and decline, proactive and reactive, animate and moribund' [3]. The view of rural education as in decline and in need resembles conceptualisations of homogenisation of rural life. The conceptualisation of rural communities as uniform, facing the same problems and challenges –drought, high rates of youth suicide, and declining socio-economic indicators in communities– depicts a landscape of disadvantage and peril of which its association is difficult to escape for rural schools. As argued by Moriarty and colleagues, this conceptualisation creates a deficit view of rural schools as 'less normal and more problematic than their metropolitan counterparts'.

In opposition to this negative 'enduring legacy of deficit' for rural education, Moriarty and colleagues correctly point out that there is a history of innovation and overcoming barriers, for example, circumventing the physical barrier of distance through the creation of the *School of the Air*, *Correspondence School* and other educational services. The impossibility of face-to-face education in some isolated areas of Australia promoted innovative alternatives of distance education. These services used technologies such as radio transceivers to communicate students and teachers [4].

This depiction of the rural sector as innovative is sustained by Moriarty and colleagues idea that being situated in the periphery, both in geographical and policy terms, is an opportunity to create exciting initiatives that are 'less likely to occur closer to the centres of bureaucratic surveillance'. Evans's criticism of social research about rural schools is that it perpetuates rural life as a constant struggle that has to be 'endured' and 'defeated' [5]. For

Evans, innovation in the delivery of education for rural and remote schools is the product of an interconnection between rural and urban spaces; which even questions the notion of remoteness in an era of globalisation.

### 3. Rural education at the core of the policy agenda

Since 1970s state and federal policies have aimed to improve the condition of rural schooling. Foremost, what these policies shared was a view of rural education that faced different challenges from urban education and a need to improve the access and quality to school and post-compulsory education and training for rural people.

During the 1970s and 1980s, a number of research studies and government reports documented several disadvantages embedded in rural education, including: a lack of access to schools faced by rural students; an inferior quality of rural school facilities to those of metropolitan schools; a lack of access by students to careers counselling or work experience; meagre advisory and auxiliary educational services; poor motivation of students and lower levels of achievement than their urban counterparts; a more restricted curriculum (especially for secondary level); a high proportion of inexperienced teachers and a high turnover of teacher; poor or limited accommodation for teachers and students; and limited work opportunities for school-leavers [6]. In addition to this long list of problems, curricula were found to lack relevance to rural people. Rural schools were mostly 'carbon copies of urban schools', neglecting the needs of rural communities [7].

In 1977, on the advice of the Schools Commission, the federal government reflected its objectives of social justice and equity with the launch of the *Disadvantaged Country Areas Program*. The program focused on equalising educational opportunities by increasing access for rural students to relevant educational resources and curriculum options. Connell argues that it differentiated from other programs, such as the *Disadvantaged Schools Program*, in that whole areas rather than individual schools were identified. In addition, it was intended to reverse the priority, mostly in terms of grants, given to metropolitan schools by the *Disadvantaged Schools Program*. The program, currently called

*Country Areas Program* (CAP), promoted innovative strategies and programs to reach rural and isolated schools, thus improving access, participation and retention rates; while also taking into account the size and remoteness of the rural community at the time of allocating funds [8]. In other words, the program focused on providing more and better services for rural schools. As argued by Wyn and colleagues, in the last two decades, some of the projects funded by CAP included upgrading school facilities, access to specialist programs in music, physical education, technical education and special education and vocational guidance.

Country Areas Program projects became the main source of change in the first half of the 1980s. However, many of these rural programs were short-term projects. According to Connell, many programs implemented in the 1970s and 1980s, like the *Country Areas Program*, were 'interesting temporary stimulants to reform; but they had little impact, because they were not given the opportunity to mature into a continually developing activity'. These programs were also subject to the political and economic short-term interest of their administrators who preferred immediate measurable outcomes. In addition, Connell argues that 'significant changes in educational practice' might take a decade to 'take effect' and another decade to 'consolidate'. Furthermore, the report *Quality of Education in Australia*, stated that reversing entrenched educational disadvantages required 'the sustained application of additional resources', where real improvements in the quality of education will come as a result of 'sustained efforts to introduce change and to maintain the momentum of change until it has affected the whole school system' [9]. In other words, and in accord with Connell, incrementing resources in a school is not a measure of improvement, 'but only of *potential* for improvement'.

As a consequence of the report *In the National Interest: Secondary Education and Youth Policy in Australia* [10], which accounted for the inequalities in educational outcomes confronted by rural youth, a further report, *Schooling in Rural Australia* [11] became the first study to exclusively focus on the needs of rural Australians. The report also focused on broadening the limited access to educational material and a comprehensive curriculum for a greater number of people living in rural areas, including Indigenous people in remote communities. It also drew attention to what is

still a pressing issue: the continuity and quality of teaching [12].

Some of the recommendations of *Schooling in Rural Australia* were also adopted in subsequent federal educational policies. While the policies advocated and looked to promote social justice and equity principles, and a better quality of education for all Australians; they had as a paramount idea providing access to disadvantaged sectors of society. The whole premises of these reports and policies of the 1970s and 1980s focused on disadvantage, chiefly in terms of access to resources. In other words, the main objective was providing rural people with an 'equality of provision' as the one enjoyed by the metropolitan population rather than focusing on a higher level of quality of education or the relevance of education for rural communities. As Wyn and colleagues argue, what they ignored is that rural schools face a 'more complex mission' than metropolitan schools, such as equipping their students for a post-school career both in their local and in an alien (the urban) environment. Although the authors of the 1970s reports would have hoped differently, this complex mission is even more relevant nearly 30 years on in the twenty-first century.

It is important to note that while in the 1970s and 1980s the focus of *disadvantage* and *access* were placed at the top of the list of priorities in the 1990s the focus shifted to the promotion of *further and higher education and training*. This could be explained by two factors: first, schooling in rural Australia had been greatly improved, in terms of resources, access and even in quality, in comparison to previous decades. Second, the federal and state governments began to put the accent in restructuring the economy and responding to the changing labour market and the competitiveness of the international market, through the development of high-technology industries in manufacturing and services. As stated by Wyn and colleagues, in the late 1980s and 1990s federal and state governments fostered and strengthened access to training for rural Australians 'to meet Australia's economic development needs'. One of the pursued avenues was by the implementation of Technical and Further Education (TAFE) institutes in regional and rural areas 'where rates of participation were still relatively low and the potential of the population was not being fully realised'.

Late in the 1990s and in the early years of this new century, rural education appeared to slowly move out of the peripheral position to occupy a more prominent place in the national education policy agenda. A *National Inquiry into Rural and Remote Education* was set by the Human Rights and Equal Opportunity Commission across the Australian territory. Together with this relevant study, the Ministerial Council on Education, Employment, Training and Youth Affairs established in 1999 a taskforce into Rural and Remote Education which developed two years later a *National Framework for Rural and Remote Education* [13].

In addition, in 1999 the federal government commissioned a study to look into *Rural and Isolated School Students and their Higher Education Choices*. Like its previous study almost a decade before, it also found a lower participation of rural students in higher education [14]. Even though the participation of rural Australians in universities improved throughout the 1980s and especially 1990s, the relation of urban to rural students was four to one. The reasons were primarily socio-economic, followed by location issues; that is the place of residence and distance from home to the nearest campus. Socio-economically, the main reasons were the cost of attending university for a rural students and their families – including moving to a metropolitan centre, a lower belief that university could offer rural students the chance of an interesting and rewarding career and that a university qualification was not necessary to obtain the job they wanted or needed.

#### 4. Rural education - as if it matters

The 2000 National Inquiry by the Human Rights and Equal Opportunity Commission (HREOC) has been arguably the most important study into the state and needs of rural education in Australia and into possible strategies for its improvement. The premises of the inquiry were to look at different interrelated issues: availability and accessibility of schooling, quality of educational services and whether schooling complied with people's human rights.

The inquiry found that many of the same issues policies and studies documented in the last three decades were still relevant for rural people. For example, distance was a critical rural education problem. Distance brings an economic cost that tends not to be covered by government

funding programs or the busing system. In terms of educational outcomes, school retention rates were lower for rural schools than metropolitan and the school performance of rural students lagged behind that of their metropolitan counterparts. Only 17% of tertiary students were from rural and remote areas. Other issues included the difficulties in attracting and retaining teachers, the lack of continuous and relevant professional development for the school staff, the lack of material resources, breadth of curriculum and availability of information technology and extra-curricular activities.

Thus the key issues for rural school people were provision, access, and quality of education; and within the access issue, cost, transport and income support were important matters to parents and teachers of rural areas. People in rural and remote areas felt disadvantaged because they have to pay more for cost of travel, and school boarding, loss of income and excursions to gain access to education. Furthermore, matters of access are interrelated to issues of quality, where: 'the inherent costs and time involved in gaining access to these resources constrain access, and impact on the quality of the education ultimately delivered' [15]. Students across Australia were also critical of the facilities they have in rural schools; such as: libraries, sporting facilities and technology provision. In sum, the feelings and perceptions of belonging to the periphery and of living and studying in disadvantage were very well represented in the inquiry.

However, not all views about rural schooling were positioned in terms of disadvantage by the Inquiry. Despite the sense of frustration about the daily barriers rural students, teachers and parents feel there is an appreciation of what rural schools can offer. Traditionally, rural schools have been attributed with advantages in school organization which led to a higher degree of individualised attention for students; a stronger cohesion between students and parents with the school and its staff; easiness and flexibility in the implementation of innovations; and lower levels of student discipline problems. Other schooling advantages reflected by rural people and in the rural literature have to do with growing up and learning in a caring environment and the development of a greater autonomy and responsibility by students. The Human Rights and Equal Opportunity

Commission inquiry reflects some of the advantages, in terms of students feeling that they are 'listened' to by their school, and that in rural schools it is 'easier to learn', and there is 'more opportunities to learn and teachers do really care about if you pass or not'. A key issue for these feelings of being considered is the smaller classes where there are greater opportunities for 'one-on-one teaching'.

Finally, the *Inquiry into Rural and Remote Education* established a set of recommendations in the face of the severe disadvantages it found in rural schooling in Australia [16]. In it, the Inquiry established a framework with five necessary features for rural schooling: availability, accessibility, affordability, adaptability and acceptability. Today, these features still encapsulate the most prominent issues for rural schools and people. Most importantly, they provide a useful framework to improve the quality of rural schooling and redress social injustices.

## 5. A return to the periphery

The *National Framework for Rural and Remote Education* set by MCEETYA in 2001 can be seen as the culmination of an effort to overcome many of the endemic problems attached to rural education. This Framework was a response to 'Recommendation 4.5' of HREOC national inquiry and its purpose was:

- To establish a framework for the development of nationally-agreed policies and support services
- To promote consistency in the delivery of high-quality education services to rural and remote students and their families
- To provide reference points and guidance for non-government providers of services and support for education in rural and remote areas
- To facilitate partnerships building between government and non-government providers of services and support related to the provision of education in regional, rural and remote locations.

The MCEETYA Taskforce followed the recommendation of the HREOC national inquiry into the 'necessity to develop a national rural education policy'; that is, to remove rural education from the place of 'poor cousin' into the centre of education policy. However, despite the promises to ensure a broad provision of access to a high quality of education for rural and remote students the framework delivered



few results to address the endemic problems. According to Pegg, the framework was never positioned as a priority policy area to generate action but as a supplementary framework 'within the broader work of MCEETYA through its various taskforces and working groups'. Furthermore, the MCEETYA Taskforce on rural education has been disbanded, as has its successor, the *Taskforce on Targeted Initiatives of National Significance*.

In sum, the momentum created to relocate rural education in the centre of the national education policy, has been lost. As a result, rural and remote education continues to be a peripheral area of educational policy.

## 6. Conclusion

In analysing the last three decades of rural education policy this paper has showed that: first, these policies have predominantly focused on 'equality of provision' rather than the quality of education. Second, that many of the disadvantages identified in policies and reports, especially the HREOC inquiry are still prevalent in rural schooling today. Third, rural education occupies a peripheral place in the policy arena. This argument is proven by the discontinuation of the *National Framework for Rural and Remote Education* and the lack of a national and state rural education policy.

The significance of this marginalisation of rural schooling is that it fails to raise the standards and quality of rural education — a quality that lags behind their metropolitan counterparts, especially in terms of schooling outcomes, which has ramifications for the future sustainability of rural communities and prospects of people.

If rural community and school issues are peripheral to the national agenda it should come as no surprise that rural students do not receive the same quality of education as their metropolitan counterparts. This raises critical issues for a socially just rural education.

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# Innovation Activity as a Factor of Teachers' Professional and Personal Self-development

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## Abstract

*The present paper deals with teachers' professional and personal self-development in the process of innovation activity. The modern school innovation space is the result of creative and integrative activities of its individual, group and collective subjects. Teachers' awareness of the nature and mechanisms of innovations, support of the teachers' involvement in active creative activity, the school management position regarding innovations contribute to teachers' professional and personal self-development.*

## 1. Introduction

Modern society needs a personality that is competent, flexibly-minded, oriented towards lifelong learning, open to new reality, ready for changes, and capable of self-development and self-perfection.

## 2. Literature Review

The problem of personality self-perfection has always been in the focus of attention in philosophy, psychology and pedagogy. In Russian philosophy personality self-development is understood in connection with "spiritual self-ascending" (V. Soloviev), ascending up to "the better-Self" (S. Rubinstein), "attainment of wholeness" (N. Berdyaev), new architectonics of personality (M. Bakhtin), psychological and spiritual self-strengthening on "the personality horizon" (E. Ilyenkov, V. Bibler, G. Batischev, etc.). Humanistic psychologists such as A. Maslow, C. Rogers, G. Allport, E. Fromm, V. Frankl, Ch. Bühler affirm that in human nature there are potentials for constant self-development. Analysis of philosophical, psychological and pedagogical literature shows that the base for self-development is creativity.

The term *self-development* is multi-dimensional as it encompasses different aspects: self-knowledge, conscious self-regulation, self-education, self-

perfection, self-efficiency, spiritual self-strengthening, self-determination, self-actualization, self-realization. L. Kulikova defines personality self-development as a process of personality's purposeful creative changes of his (her) own spiritual values, moral, aesthetic, practical, intellectual, emotional and characteristic features for more successful achievement of life purposes and more effective fulfillment of human and social predestination [1].

Self-development starts when objectivity becomes a conscious part of the teacher's personality to find its expression in the results of innovation activity that includes deep personal changes. Innovation activity is a type of human activity that possesses the following characteristics: subjectivity, activity, objectivity, purposefulness, motivatedness, creativity, (L. Bueva, F. Vasilyuk, M. Kagan, A. Leontiev, V. Petrovsky, A. Khutorskoi, V. Shadrikov, D. Feldstein), responsibility for the changes in the pedagogical process, realization of internal potentialities. Among the mechanisms that motivate the person to professional and personal self-development are emergences of new forms of activity, realization of needs, anxiety, crises, aspirations, incentives, etc.

For better understanding of the concept of "innovation" we rely on E. Dundon's definition of innovation which includes creativity, strategy, implementation, and profitability. She emphasizes that creativity is only part of the whole process of innovation and distinguishes nine seeds of innovation: three in the area of creative thinking (believe in creativity; be curious; and discover new connections), three in the area of strategic thinking (see the big picture; look to the future; and do the extraordinary), and three in the area of transformational thinking (seek greater awareness; ignite passion; and take action) [2]. The analysis of E. Dundon's key components of innovation lets us conclude that the main feature of innovation is the rising value of the final product or services, positive social and (or) economic changes that occur in educational institutions as a result of specially

organized innovative activities to achieve a new quality of education.

Based on the ideas of A. Maslow, V. Frankl, E. Fromm, L. Bueva, A. Leontiev, V. Petrovsky, V. Slobodchikov about innovative activity as the highest factor of personality self-development we found out that innovative activity has favorable possibilities for professional and personal self-development of the teacher for several reasons: as a personal category it strengthens the personal component of the professional self-development of the teacher; as a constructive process it represents transformations of both the teacher environment and the teacher personality; moreover, innovative activity influences the professional and personal self-development of the teacher by means of the psychological mechanisms that stimulate that innovative activity; deepens value orientations of the teacher and promotes his or her spiritual and moral self-strengthening; changes the teacher's self-consciousness in the direction from necessity to desire, from social to spiritual and moral motivation of self-knowledge; creates a possibility for raising the teacher's status in the pedagogical community that in its turn motivates internal self-renewal and leads to stabilization; favors the teacher's self-realization in the innovative school surrounding and, finally, inspires the teacher for self-perfection [3].

Recently the problem of innovative activity has become one of the most important in Russian pedagogy. The works of such researchers as M. Klarin, V. Layudis, L. Podimova, S. Polyakov, V. Slastenin, A. Khutorskoi, and N. Yusufbekova are devoted to innovative activity. Analyzing the essence of innovative activity, A. Khutorskoi emphasizes that it is a complex of measures taken to secure an innovative process at this or that level of education as well as the process itself. In his opinion, the main functions of innovative activity are to change the meaning, goals, contents of education, forms, methods, technologies, teaching aids and the system of management. [4] It is very important to prepare the teacher to manage innovative processes.

### 3. Analysis of Findings

Having received opportunities to choose different educational systems and trying to combine teaching with searching activity in the innovative educational space, teachers face a number of difficulties and contradictions: between the ethical and professional requirements to the social role of the teacher and the level of his personality formation as an important internal regulator of the professional and personal self-development; between the internal value orientation of the teacher and general cultural premises in the pedagogical school collective; between the realization of the essence of the innovation activity and the internal potential abilities of the teacher to correspond it;

between the need to develop the "I-concept" and the existence of conditions for professional and personal self-development; between the developing author's position as an inseparable component of innovation activity of the teacher and the managerial, pragmatic-technological approach of the school administration [3].

On the one hand, the overcoming of these contradictions is a motive power of the process of the teacher personal and professional self-development. On the other hand, innovation activity accelerates the process of the teacher self-development. Taking it into consideration, we consider that it's necessary to create conditions that will further accelerate inclusion of the teacher in the innovation activity.

Efficiency of the influence of innovative activity on the teacher personal and professional self-development depends on external and internal factors. It's very important for us to identify the most significant factors associated with the effective integration of the teacher in the innovation affecting the appearance of his desire for professional and personal self-development towards professional maturity. External factors are the circumstances affecting the appearance of internal factors, which in their turn sustain the process of self-creation of the teacher in the innovation educational school space.

We believe that one of the most important external factors contributing to the inclusion of the teacher in the innovation is *the humanistic orientation of the educational process*. At the present stage of Russia's education development the leading trend of modern school and pedagogical science is appeal to the philosophical grounds, reorientation towards the personality development and revival of the humanistic tradition, which has never faded in the culture of mankind and has been maintained by science. This tendency gives rise to such internal factors as *humanistic orientation and motivational readiness of the teacher to the innovation and personal and professional self-development*.

For the teacher to understand standards and norms of pedagogical activity and to be easily involved in the innovation for transforming the pedagogical reality and himself it's necessary to provide *psychological and pedagogical support for the teacher's personal and professional development*. We consider it to be the second external factor. Psychological and pedagogical support ensures the creation of conditions for taking optimal decisions by the subject of development in various situations and life choices and is based on the unity of four functions: diagnosing the problems, information about existing problems and ways to address them, consulting at the stage of decision making and preparing a plan for solving the problem, rendering initial assistance at the stage of the plan realization. (R. Kazakova, A. Tryapitsina).

Through psychological and pedagogical support the teacher can more quickly learn the norms of the pedagogical profession, turn his activity into

normatively creative one and improve his level of professional competence that is a prerequisite for purposeful self-development. Professional competence is manifested in the teacher's self-confidence, self-assertion, self-realization and grasping the meaning of professional activity. "Competence" refers to the application of knowledge, skills and abilities of man. A competent person (from Latin *competent* – appropriate, capable) is a "well-informed, recognized expert in a subject." A competent specialist is a specialist, who in the course of professional development in pursuit of the ideal acquires a set of competencies (including didactic and personal). In our opinion, *professional competence* in the process of integrating the teacher in innovation activity is an important internal factor that encourages him to personal and professional self-development.

The teacher joining the pedagogical community primarily accepts the value orientations, norms and traditions that have already been predetermined by this pedagogical community in the process of innovation. The *pedagogical community orientation towards personal growth* as manifested in the choice of effective means of cognitive activity, reflection, development of ability of self-realization and management is the third external factor that furthers integration of the teacher in the innovation.

To accept the values of the pedagogical community and strive for personal growth in the innovative school space the teacher must be the subject of the innovation activity and professional self-development. G. Prozumantova considers innovation activity as a way of the authorship existence. The subject is the author of his action (from initiative to responsibility). So, another internal factor of the teacher personal and professional self-development is *his ability to be the subject of the innovation and his own development*.

Having reviewed the factors affecting the inclusion of the teacher in innovation activity, we must determine the pedagogical conditions that accelerate the process of professional self-development. These conditions enhance personal growth of the teacher, stimulate his systematic self-development and "provoke" conscious volitional efforts of his personality on the smooth self-transformation.

Defining the first condition, which promotes professional self-development of the personality of the teacher, we turned to conceptualize the experience of pedagogical collectives of "cultivation" of the personality of the teacher (V. Karakovsky, A. Tubelsky, V. Stepanov, A. Khutorskoi). In the process of analysis, we found that the success of "nurture" is largely due to the position of the teacher in relation to the innovation process, professional self-development and personal level of formation of his knowledge about the nature and mechanisms of these processes. According to T. Shamova, group and individual needs and motives of the teachers receiving educational information they need, require the introduction of school information management system. Therefore, we

believe that *creating teachers' awareness of the nature and mechanisms of innovation, professional and personal self-development and mastery of personal and meaningful ways of this self-development* is an important condition for professional and personal self-development of the teacher. We have identified four levels of the teacher's awareness: high, medium, low, and zero [3].

Innovation is a creative activity. The teacher's creativity involves a comprehensive and varied use of his basic theoretical knowledge and practical skills, the vision of a new problem in the seemingly familiar situations and finding ways to solve it.

The teacher's creative activity is related to the specific features of the emotional-volitional sphere of his personality. According to N. Postalyuk, the most important among them are the following: the ability to focus creative efforts – perseverance, courage and independence in the judgments, the tendency to a reasonable risk, optimism, a high level of self-appraisal, positive self-image as a whole. The teacher's creative activity is impossible without the development of his capacity for creativity. Creativity is a personal quality, which presents a capacity for creativeness in different spheres of life, as well as a capacity to provide support for creative self-realization to others [1].

There are not many teachers, who may be called researchers. Experience shows that not every teacher can introduce innovations in his teaching as represented by either a methodologically sound processed content or the methodology of its teaching. But every teacher can creatively rework innovations, discoveries of other colleagues and use them in his own activities. Not a blind copy but a creative correlation of theory and practice of education and training with the peculiarities of his personality, with the specifics of work defines the creative beginning of the innovation. We assume that the second condition of the teacher's personal and professional self-development is *support of the teacher's amateur inclusion in an active creative activity to transform the educational reality and himself*. Using the study by V. Kan-Kalik, N. Nikandrova, A. Markova, E. Shiyonov on pedagogical creativity we distinguish four levels of pedagogical creativity (adaptive creativity, reproductive creativity, creativity as self-discovery and creativity as finding of principally new decisions) that correspond the certain levels of personal and professional self-development of the teacher.

To ensure the teacher awareness of the innovation and inclusion in the active creative activity, it's necessary to introduce changes in the system of school management. Therefore, an important condition for effective teacher's self-development is *orientation of the school management towards personal and professional self-development of the teacher* as it largely determines the level of this pedagogical community development.

The above enumerated structural components are interrelated and form a whole dynamic system. For experimental purposes we chose the following criteria: *value guidelines* that provide purposeful character of innovation activity and promote professional self-development of the teacher involved in innovations; *creative activity* of the teacher that stimulates the growth of professional competence and the teacher's pedagogical culture; *reflection* of innovation activity and personal and professional teacher's self-development that help him reveal potentialities, overcome difficulties, regulate his pedagogical position, gain experience of professional activity.

The process of professional and personal self-development of the teacher begins at the university, continues during all his or her pedagogical activity and is enhanced by means of using innovations.

#### 4. Contribution to Knowledge

Modeling the process of the teachers' self-development we distinguish four levels of their promotion in the innovative activity. The first level is *normatively creative*. At this stage new teachers realize and accept the norms of their professional activity, reveal initial contradictions – a gap in their activity and orientate themselves towards changing the norms of their activity, they realize innovations and turn to creativity. This level is characteristic of the teachers at the beginning of their teaching career although for some teachers it may remain the limit of their activity.

The second level of the teacher's readiness for innovation activity is *partially searching*. At this level the teacher, gets involved in the innovation activity, studies, selects innovative technologies and teaching devices and lets them through. Being in constant search, the teacher finds himself in the innovative educational space, begins experimenting (works out projects, prepares curriculum for elective courses), realizing the ideas he finds.

The third level is called *heuristic*. The teacher's involvement in the innovation activity includes first testing and consistent preparation of the author's concept. It's necessary to give the teacher a chance to create, produce teaching materials and teach him or her to solve problems independently with the help of the heuristic approach. This approach is based on critical thinking and search for new ways of achieving new goals. At this level pedagogical creativity is characterized by introducing modifications in the teaching process. The teacher acquires individual orientation of the innovation school space, creates a spectrum of his own necessary habits and skills on the basis of reflection, diagnosing, prognoses of difficulties that await him in the process of innovations.

The final level is the *research level*. It emphasizes the present requirement for every teacher to be a researcher of his practice. Analysis shows that about

80% of teachers cannot achieve this level after working at school for 10 years. The main psychological characteristics of this level are urge towards high efficiency in creative activity (creation of student's books), preparation of the results of their activity in the form of dissertation, strengthening of their spiritual desire for development, experience of cooperation, high level of independence in taking decisions, responsibility for the changes introduced in the pedagogical process, self-realization of internal potentialities, high level of desire for self-development.

The model that we have developed reflects the gradual promotion of the teacher in the innovation activity and, consequently, his professional and personal self-development. The model helps identify conditions for establishing a system of pedagogical support.

The problem of the impact of innovation on the personal and professional self-development of teachers is of particular relevance in connection with the processes of modernization of Russia's education, on the one hand, and lack of training future teachers for this, on the other hand. The effects of innovation on professional and personal self-development of teachers, we assume, will be productive if we realize the conditions discussed previously.

To test the first condition – generating information awareness of the teacher of the nature and mechanisms of innovation and his professional and personal self-development we have developed a system of information and methodical support of the teacher in the process of inclusion in the innovation.

At the initial stage we tested the degree of awareness about innovation and the teacher's professional and personal self-development. The experiment revealed that young teachers need additional knowledge. The main sources of this knowledge are books, magazines and manuals, but communication with colleagues is not value-relevant. The greatest preference they give to organizational forms of educational work (seminars, workshops, teaching trips, meetings).

Based on the data obtained, we organized a course "Fundamentals of Professional and Personal Self-development of the Teachers Involved in Innovations." This course has contributed to deepening the teachers' theoretical foundations and cognitive development of their interest in the problems of professional and personal self-development stimulated their desire to deeply understand them. Then, the participants of the course got acquainted with the experience of pedagogical collectives of school leaders and best teachers, the winners in the National Priority Project "Education."

The course was also supplemented by "The School of the Young Teacher" to assist young teachers in solving problems arising in the process of teacher induction. Consideration of theoretical issues was accompanied by workshops where young teachers

prepared drafts of different lesson types using new technologies, planned the activities of the class teacher, designed trajectories of development for individual students.

Then, we conducted a training for personal growth, aimed at identifying the young teacher's self-potential, determining the trends and prospects of further internal growth, strengthening adequate professional self-esteem, positive "I-concept." In the process of participation in this training the young teacher determined himself what to change and how to become more sophisticated and flexible.

Taking into consideration international experience on the use of professional career passports for evaluating teachers, we developed a portfolio of the teacher achievements, a folder that reflects the degree of progress in his professional and personal self-development, the ability to operate successfully in different educational situations and effectively carry out certain tasks [5, 6].

An important part of working with teachers is the activity of the school council, which provides constant information to teachers on the inclusion of teachers in school innovations and their achievements.

When verifying the second pedagogical condition – support of the teacher's amateur inclusion in an active creative activity to transform the educational reality and himself – originally we found that this type of activity for most teachers is not value-relevant, because they have poorly developed desire for creative achievement, ability to self-organization, coordination and restructuring activities.

Organizing support of the teacher's amateur inclusion in creative activities, we relied on the ideas of foreign experience about mentoring [6]. We selected master teachers from the winners in the National Priority Project "Education" who have a high level of professional self-development and seek cooperation with other teachers. We formed several teams: "researchers", "creators", "discovers" and a norm group and tried to encourage teachers to integrate in experimental work. To enhance teachers' cultural and methodological skills of experimental work we organized a seminar.

When verifying the third pedagogical condition – orientation of the school management towards personal and professional self-development of the teacher – we found that such characteristics of management as informal friendly climate, cultivated values, inclusion of innovations, innovative diagnostics contribute to strengthening the internal "I" (the integrity of the teacher's personality). In our opinion, innovative educational environment of the modern school as a factor of the teacher's inclusion in innovations reinforces the validity of the identified management functions.

## 5. Conclusion

The results of the implementation of the three pedagogical conditions are reflected in control measurements which show changes of the chosen criteria: value guidelines (26, 5 %), creative activity (31 %), and reflection of innovation activity, personal and professional self-development (29 %).

We may conclude that teachers' awareness of the nature and mechanisms of innovations, support of the teachers' involvement in active creative activity, the school management position regarding innovations contribute to teachers' professional and personal self-development.

The modern school innovation space is the result of creative and integrative activities of its subjects. The subjects of innovation space are individuals (teachers, students and their parents, partners of the school community), groups (creative groups, associations, school teams, etc.) and collectives (educational institutions, professional groups, universities, institutes for improving teachers' qualification). Collective subjects are considered not as institutions but as professional communities that promote professional and personal formation of teachers.

## 6. Future Work

The modern school innovation space gives great chances to teachers for their personal and professional self-development: freedom of taking decisions about their involvement in innovation school space; freedom of choosing the type of innovation activity (its contents, technologies, forms, methods, etc.) that favor achieving success and self-realization of the teacher at school; freedom of constructing dialogic relationships with people of different professional levels and different social groups; freedom of choosing different collective communities and sub-spaces.

Humanization of control in the field of education makes it possible to use the anthropo-central approach oriented towards the development of the creative potential of teachers and their active participation in the process of innovations that contribute to their professional and personal self-development.

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# Portfolio Assessment of Communication Research as Subject in the Context of ODL in Tertiary Education

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## Abstract

*In some academic institutions, venue-based examinations have been replaced by portfolio assessment in selected subjects/modules. This paper considers one such module (Communication Research) at THE University of South Africa (Unisa) where research has to be conducted for a specific task, data needs to be collected, interpreted, findings have to be presented according to specific criteria, and a portfolio containing the evidence has to be submitted for assessment. One of the purposes of the portfolio is attaining credits towards a degree. The compilation of the portfolio is regarded as a practical learning activity and it demands evidence that learning has taken place. The reflective research done for this paper explores how the current portfolio assessment practice applied to the selected module meets requirements in terms of formative and summative assessment as well as the performance indicators of assessment.*

## 1. Introduction

This paper is presented in the context of an Open Distance Learning (ODL) environment — Unisa in particular. ODL in terms of this paper implies that students are physically (geographically) separated from their learning institution and lecturers. Students registered at Unisa reside anywhere in the world and study mainly by means of correspondence, at their own pace and in their own time. The acquisition of knowledge takes place by means of an integrated approach to learning: multiple teaching and learning strategies are applied by lecturers; various resources and technologies are used to enhance study across the geographic, economic, social, temporal, educational and communication distances and boundaries. The ultimate aim of a mega university, such as Unisa, is the creation of an open learning environment in which the students are still the foci of education. Access, utilisation and integration of advanced Integrated Communication Technology (ICT) enhance resource-based learning and student support, as well as the aim to encourage and guide

students to accept responsibility for their own learning in promoting the proliferation of life-long learning and research [1].

The purpose of this paper is to reflect on how portfolio assessment applied in communication research (COM306D) as a compulsory subject for the BA Communication Science degree, meets various teaching aims, learning outcomes, a number of research methodological criteria, and whether and how it teaches students to apply theory in practice. The goal of the paper is applied research and the objective is descriptive by nature [11].

A portfolio presented for assessment in COM306D contains evidence of achievement — based on research done by students, after selecting an authentic pre-determined (real-life) task. Students exercise a choice between different research issues, such as conducting a content analysis of advertisements; a survey of readership of newspapers, or a communication audit (based on four of the eight domains) conducted at an organization of their choice. A report has to be presented on the research done and all claims have to be substantiated by evidence from the research done. A conceptual framework containing the required criteria also serves as the mark scheme and is provided to students upon registration. All criteria are evaluated on a five-point scale and the portfolios are assessed for examination purposes implying a non-venue based examination [2].

Assessment, in terms of the South Africa National Qualifications Authority policy document and the Assessment Policy of Unisa is defined as the structured process by means of which evidence and good judgments are made about the performance of an individual against agreed criteria to determine whether learning required in attaining specific outcomes is on standard with regard to the “registered national standards and qualifications” [3], [4].

## 2. Assessor requirements and competencies

Unisa requires that all academics undergo formal assessor training (in order to comply with national regulations). Competencies required are, amongst others, to be familiar with the purposes of assessment, adhere to assessment principles, and know which competencies are to be assessed, the assessment policy and strategy, and assessment activities. Lecturers also have to be able to implement assessment, evaluate and judge assessment evidence, record and report assessment, provide feedback to students and critically reflect on assessment process. Lecturers are also required to arrange for assessment logistics and resources and attend to the special needs of students [3], [5]. Amongst these are assisting students with physical needs (e.g. visual impairment, or those with no electronic access) and inadequate language abilities, issues around time management and assisting students with psychological barriers related to their studies. Physical geographical barriers, are to a certain extent overcome by making Digital Video Disks of satellite broadcasts (only available in Southern Africa at this stage) available to students, through interaction and postings on *myUnisa* (an on-line, interactive, electronic social and academic medium), short message service (SMS), and the use of Skype.

COM306D deals with constructs and terms unfamiliar to students as COM306D is their first encounter in conducting research and the preparation of portfolios. The rubric (conceptual framework) requires an understanding of the concepts and principles relevant to communication research.

Clear instructions and requirements related to both the assignments and the portfolio, guidelines for answering questions and compiling the portfolio, due dates, assessment outcomes and the purpose of assessment, the mark allocation, assessment criteria and questions asked at different levels of thinking (holistic, criteria-specific rubric), how and when feedback will be given are provided in the first tutorial letter and a generic tutorial letter available to all students registered for Communication Science subjects that students receive upon registration [2], [6].

Each interaction between student and lecturer can for instance be regarded as a form of assessment. The success of portfolio assessment does not only depend on what the student presents, but also on the competencies of the lecturer in terms of assessment.

## 3. Portfolio assessment as strategy of teaching

Formal and informal assessments are available to registered students. Informal assessment is done by means of telephonic discussions, *myUnisa* and e-mail enquiries (turn-around time of 24 hours), personal visits, evaluation of draft assignments (within two working days after receipt) and/or portfolios, satellite presentations (during which questioning from students via telephone or on-screen are accommodated) and face-to-face discussion classes. Formal assessment is done once a student officially submits the assignment or portfolio to the university for formative or summative assessment purposes. Assessment of assignments and draft portfolios is ongoing and results in continuous assessment for those students who utilize these opportunities. Before the marks are recorded on the system, the module coordinator moderates a specific number of assignments and portfolios assessed by each lecturer and external marker.

Students registered for COM306D are required to submit one written/typed (as opposed to multiple-choice) assignment addressing the first phase in the development or compilation of the portfolio, namely the steps in the planning of the research [2]. This assignment serves a number of purposes, such as ensuring research is done over time and that the portfolio (containing evidence) is not compiled at the last minute. It introduces students to subject terminology and the methodology of research, the compilation of a portfolio, guides students on how to conduct authentic research based on scientific principles, clarifies both formative and summative assessment, theories applicable to each task and represents the planning phase for the research to be conducted in a selected real-life setting. The written/typed assignment (no evidence of research included) is subject to formative assessment with feedback (individually) as well as in a tutorial letter sent to all students registered for the module. Although the mark awarded for the assignment is indicative of the student's performance — feedout), the main purpose of the assignment is to identify gaps and shortcomings and to re-direct students to remedial work where necessary — feedback [7]. The written assignment allows the lecturer to monitor and guide the learning process. It allows the student on the other hand to improve personal development, to meet the technical and academic requirements of report writing, and critical thinking skills.

An approach of constructivism and constructive alignment are applicable, since learning is assessed in qualitative terms, the student has to create meaning and the assessor has to provide guidance to

ensure the transfer of knowledge [8]. The assessment and feedback should provide a learning experience with specific meaning for students, set a platform for meaningful improvements, and help students to understand the requirements of the module and presentation of the required report [6], [9]. Assessment is integrated in the learning process as students make enquiries, many present drafts of assignments or portfolios for non-credit bearing assessment, formal comment and feedback from the lecturer. The goal of assessment for both the assignment and portfolio is overt and expressively addressed in a number of tutorial letters.

Assessment is a comprehensive and continuous process that can take many different forms. Assessment of assignments and portfolios are criterion-based. Each heading of the written/typed assignment (which also forms the foundation for the portfolio) contains the required criteria to be addressed. Formative assessment is done on assignments and draft portfolios before these are submitted for credit-bearing assessment. Integrated assessment is also applicable, since a number of outcomes and assessment criteria are assessed together in both the assignment and the portfolio. Asynchronous assessment is through the use of *myUnisa*. This on-line delivery system is relatively time and place free with daily or weekly interaction between lectures and students and amongst students themselves [4].

### 3.1. Meeting summative assessment criteria

COM306D assessments do meet the criteria of summative assessment [1], [7]. The evidence of achievement (in both the assignment and portfolio) is relevant to the goal, the clear and concisely formulated criteria of the conceptual framework as determined by the curriculum and the contents of the module. Assessors do make judgments between evidence and criteria and the rating awarded indicates the degree to which the criteria have been met to the full extent. Judgment of the assessor does invoke debate — whether amongst students and the lecturer on *myUnisa* (electronically), personally, telephonically or via electronic mail, amongst fellow students in discussion groups or via *myUnisa*., Lecturers and external markers (assessors) evaluate and interpret qualitative and quantitative information that students obtained from diverse contexts [9]. Although the majority of the portfolio relates to qualitative information, students who conduct survey research have to interpret and present quantitative data. Students selecting the first task on the content analysis, present the occurrence of creative concepts in selected advertisements in a tally sheet.

Due to large student numbers (there are approximately 450-750 registered students in COM306D per semester and two full-time lecturers), the university makes use of external markers who meet specific requirements. Some of these external markers are from industry, others are at tertiary institutions and some of them are ex university lecturers in the discipline.

The use of external markers sometimes results in different interpretations of the principles of assessment. The lecturers and external markers are not always consistent with their interpretation of the varying contexts related to the different types of tasks, the allocation of marks on the rubric, their ability to judge whether students have used the opportunity to demonstrate what they have mastered (fairness), and their interpretation of validity. Content validity relates to assessing outcomes of the module and mastery of students' skills, knowledge, attitudes and values. Construct validity deals with the measuring instrument (the mark scheme or assessment rubric). It involves content and criteria related evidence (does it meet research methodological requirements?) and relates to other concepts in the rubric. The assessment rubric relates to a specific theoretical perspective applicable to each specific selected task [2], [10], [11].

The maintenance of consistency (reliability) of the measuring instrument is also of concern. Reliability is ensured when more than one lecturer assesses the same portfolio and when the marks assigned by the different lecturers are more or less equal. Inter-coder and inter-judge reliability is ensured when the internal consistency of the assessment of a research task by two or more assessors occurs [10]. Issues on validity are usually brought to the attention of Unisa lecturers by the student (unless exposed through moderation performed by the module coordinator and the second and external examiners). It is therefore sometimes necessary to re-visit, re-formulate or clarify meanings, contexts and ratings. It is also true that student interpretation of the formative (assignment) and summative assessment (portfolio) differ from that of lecturers — specifically with regard to the final mark obtained. Students understand a good or high mark in the assignment to imply they will get a similar mark in the assessment of the portfolio. That is not always true, since the assignment contains no evidence of research conducted, and only addresses about 45% of all the planning criteria. The monetary value of assessment is mainly determined by the use of external markers, since assessment is part of academic responsibilities. The planned implementation of electronic assessment will also play a significant role in this regard because external

markers will also have to be trained as assessors, computer software will have to be made available and training in the use thereof is also required.

#### **4. Portfolio assessment based on research methodological criteria**

Portfolio assessment as exercised by lecturers in COM306D provides opportunity to assess and evaluate foundational competence (does the student know what to do and why?) as well as reflexive competence (does the student illustrate ability to integrate performance and understanding, to adapt to different circumstances, and to explain reasons behind actions?) [3]. In order to attain applied competence, the teaching aims and learning outcomes applicable to the problem-based learning approach of the module must be and is made known to and clearly understood by each student. In the aim to help students understand basic research techniques and methods, and how to apply these in varying communication contexts, it is expected that students will develop a number of their skills, such as research, problem-solving, communication, self-responsibility and individual skills as well as their individual values [2], [11], [12].

The portfolio presented on research done on one of a content analysis of advertisements; a survey of readership of newspapers; or a communication audit (based on four of the eight domains) conducted at an organization of own choice, evaluated on a five-point rating scale is mainly qualitative by nature. The rubric starts with generic criteria, such as formulation of the main research issue in terms of five criteria (issue, nature of design, time dimension, action, and method to be used) and a distinction between and clear demarcation of the target and accessible populations, the population parameters and units of analysis. The requirements then progress and address assumptions, sub-issues and research questions, the theoretical perspective applicable to the selected task, as well as a description of the nature of the applicable research design. The selection of this design has to be interpreted in terms of how the applicable criteria of the selected design are applied to the selected research being done. The data-analysis, findings and conclusions all have to meet specified criteria and finally, the student also has to complete a section on self-assessment and self-evaluation.

##### **4.1. Portfolio assessment based on technical presentation and self-assessment criteria**

The selection, presentation, reflection and self-assessment are performance indicators of portfolio

assessment [12]. Students select a task of their choice, represent their research in manageable chunks and become aware of their long-term learning outcomes. Students reflect on their work, the feedback, and interaction with students and make improvements on work assessed by a lecturer. Commenting on draft documents promotes joint participation and together with *myUnisa* it provides an added bonus because on-line students benefit from questions and answers posted on *myUnisa* resulting from these assessments.

The technical presentation as well as their self-assessment (criteria provided in Tutorial Letter 101 upon registration) is also assessed with marks being assigned for each. Technical aspects relate to a declaration on plagiarism, the table of contents, grammatical presentation, and the use of sources consulted and the list of sources compiled.

Students are subject to self-reflection when having to do the self-assessment exercise (“one of the most critical performances for portfolio assessment” [12]. These assessments (based on five questions related to their experiences of having conducted research) allow students to reflect on their roles in, achievements and outcomes of their own learning, as well as the cohesion of their research and portfolio. One of the critically important questions that students have to reflect on in their self-assessment relates to their own strengths and weaknesses. Self-assessments are also assessed by the assessor (a mark is awarded) and have the value that they are often used for discussions with students who fail the module.

#### **5. Recommendations**

It is unfortunately not possible to get to know each student to be assessed due to the geographical boundaries and nature of the institution. Nor is it possible to have each portfolio assessed by two assessors due to the staff/student ratio and other practical problems experienced by the institution in this regard [9]. The use of electronic portfolios in future may bring a solution in this regard, since the appointment and training of a large number of external markers will result in improving the student/lecturer ratio.

It is recommended that the possibility to conduct specific research to determine the attitude, perception and appreciation of students on problem-based portfolios be examined. The latest trend of giving candidates insight into development of course content and assessment could also be considered in the future. It could also be of value to determine whether students realize and experience positive effects of the assessment of portfolios related to

problem-based learning as intended. This information could add value to portfolio assessments as done in COM306D.

## 6. Conclusions

Assessment should be meaningful to both assessors and students and assessment strategies need constant revision. It is also necessary to provide continued training of external markers and newly appointed lecturers. Guiding questions are exchanged amongst lecturers and external markers and the rubric is revised in each semester or annually. Lecturers share notes and interpretations, and external moderators moderate a specified number of portfolios spread across the percentage continuum. The university also makes provision for official appeals and re-marking of portfolios for those students who comply with specific minimum requirements applicable to these applications.

Studying by means of presenting portfolios has many values and requires active student participation. Learning and attaining knowledge are the building blocks to ensuring cognitive and personal growth and portfolios stimulate personal and professional development, encourages self-directed learning, and stimulates the development of various skills, such as communication and writing skills. Portfolios are generally student-centered, stimulate learning and can also serve the purpose of reflective research. The portfolio in COM306D can, particularly for students in industry, serve the purpose of being a learning document since future research conducted can be based on the conceptual framework used.

Portfolios also pose very specific challenges to lecturers, such as the utilization of electronic assessment and on-line marking.

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## **Session 31: Cross-disciplinary Areas of Education**

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# Comparing Mathematics Self-Efficacy and Teaching Self-Efficacy of Early Childhood and Elementary Education Pre-service Teachers

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## Abstract

*This study examined early childhood pre-service teachers' and elementary pre-service teachers' mathematics self-efficacy and mathematics teaching efficacy. Participants included 89 early childhood pre-service teachers and 81 elementary pre-service teachers at a Midwestern university. Instruments included the Mathematics Self-Efficacy Scale (MSES), Mathematics Teaching Efficacy Beliefs Instrument (MTEBI) and the Illinois Certification Testing System (ICTS) Basic Skills Test. The results indicate that early childhood and elementary pre-service teachers' mathematics self-efficacy and mathematics teaching efficacy differ.*

## 1. Introduction

Mathematics has long been a subject that causes anxiety in students. Pre-service teachers are no exception. One possible explanation is that students possess low self-efficacy in the area of mathematics. Social learning theorists define perceived self-efficacy as a sense of confidence regarding the performance of specific tasks. Bandura [1] defined the construct of self-efficacy as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances. It is concerned not with the skills one has but with the judgments of what one can do with whatever skills one possesses." In other words, regardless of mathematic ability, students' effort may be affected by their own judgment of their capability to solve mathematics problems. Mathematics self-efficacy refers to one's beliefs in their ability to do mathematics and is often assessed in terms of one's own judgment of their capabilities to solve specific mathematics problems, to perform mathematics-related tasks, and to succeed in mathematics-related courses [2].

## 2. Literature Review

Research shows that pre-service teachers report high levels of mathematics anxiety and when asked to express their views of mathematics are more likely

to indicate negative views such as "Mathematics is my enemy" and "Math is something I hate" [4], [5], [8], [10]. Mathematics anxiety has been found to be negatively correlated to elementary pre-service teachers' mathematics teaching efficacy [4], [9]. Mathematics teaching efficacy refers to one's beliefs in their ability to teach mathematics effectively.

Most studies that examine mathematics efficacy and teaching efficacy focus on elementary pre-service teachers. However, with a report questioning the preparation of early childhood teachers in teaching mathematics and evidence that early childhood teachers have less content knowledge and less positive attitudes towards mathematics compared to upper elementary teachers, it is imperative that their math-efficacy and beliefs be examined [7], [11]. The current study attempted to identify differences between elementary and early childhood education pre-service teachers' mathematics efficacy and teaching efficacy.

## 3. Methodology

Participants for this study were 89 early childhood and 81 elementary teacher candidates at a large teacher preparation institution in the Midwest. Participants were administered two instruments to collect quantitative data related to the study.

The first instrument, the Mathematics Self-Efficacy Scale, developed by Betz and Hackett was used to determine students' mathematics self-efficacy. The scale consists of 34 questions using a 10-point Likert-scale and includes two subscales: Mathematics Task Self-Efficacy (MTSE) and Mathematics-Related School Subjects Self-Efficacy (MRSE) [3]. The MTSE subscale asks participants to rate their capabilities to solve specific mathematics problems and perform mathematics-related tasks. The MRSE subscale asks participants to rate their ability to succeed in various mathematics-related courses (e.g., basic college math, economics, and statistics).

The second instrument was The Mathematics Teaching Efficacy Beliefs Instrument which consists of 21 items on a 5-point Likert-scale and includes two subscales, Personal Mathematics Teaching Efficacy (PMTE) and Mathematics Teaching Outcome Expectancy (MTOE) [6].

## 4. Findings

Independent t-tests were conducted to determine if there were significant differences between early childhood and elementary education pre-service teachers in regards to their mathematics self-efficacy and mathematics teaching efficacy. Elementary pre-service teachers rated their MTSE significantly higher than early childhood pre-service teachers ( $t=2.41, p<.05$ ), however no differences were found in terms of the pre-service teachers' MRSE. In regards to teaching efficacy, early childhood pre-service teachers rated themselves significantly higher on both scales of the teaching efficacy instrument, PMTE ( $t=1.98, p<.05$ ) and MTOE ( $t=2.16, p<.05$ ).

## 5. Contribution to Knowledge

The findings of this study show that students who are in early childhood programs and elementary education programs are different in terms of their mathematics self-efficacy and mathematics teaching efficacy. Elementary pre-service teachers are more confident of their mathematical abilities, however early childhood pre-service teachers are more confident of their mathematics teaching abilities. Early childhood pre-service teachers seem to feel that less mathematical knowledge is necessary to teach at the early childhood level whereas elementary pre-service teachers have more knowledge but do not feel prepared to teach at the elementary level.

## 6. Conclusion

This study provides further knowledge about the mathematics abilities of pre-service teachers in early childhood and elementary education and should help inform teacher preparation coursework and clinical experiences at both levels. Elementary pre-service teachers should be provided further opportunity to apply their mathematical knowledge so they can be more comfortable teaching and early childhood pre-service teachers should be required to take more mathematics courses to improve their confidence in mathematics.

## 7. Future Work

There are many future research directions that have arisen from the findings of this study. First, conducting interviews and/or focus groups of both early childhood and elementary pre-service teachers should provide researchers deeper insight into the attitudinal and dispositional differences between these groups. Additionally, conducting a longitudinal study where new teachers are administered the surveys used in this study to determine if experience

significantly influences beliefs about teaching ability and impact on student outcomes. And if so, how swiftly do these attitudinal changes occur? Lastly, it would be interesting to expand this study into other content areas such as literacy, science, and social studies.

Based on what we know about teachers, their feelings towards mathematics, and the importance of mathematics for children, it is imperative that this line of research continues. It can provide valuable information so teacher preparation programs can provide the necessary training to produce the highest quality teachers possible. It is imperative that teacher educators and pre-service teachers work together towards this goal. Future teachers must be taught the importance of mathematics for their students and must learn to believe that they are capable and important role players in children's understanding of mathematics.

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# From Early Years to School: Involving Fathers from Disadvantaged Areas in Early Educational Settings

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## Abstract

*Findings presented here relate to an innovative one year project in an area of multiple deprivation in the north east of England, the goal of which was to engage fathers and male carers in their children's transition from an early years to formal schooling in order to enhance children's enjoyment, achievement and learning at this critical early stage of development. The project was successful in engaging men, recording 76 male attendances at activities during the project period, nineteen of which were recorded after the transition, at school based activities. Strategies found to be effective in engaging men at a strategic level were partnership working with an expert agency on male inclusion and the use of a highly gender differentiated approach. At an operational level, successful approaches included the use of a highly individualized, respectful and face-to-face initial approach by a dedicated Fathers Transition worker, complemented by intensive follow-up contact via mobile phone, the use of male orientated activities and the engagement of mothers, as well as fathers*

## 1. Introduction

This case study concerns a Project set up in a predominantly white working class area, of multiple deprivation in the North of England. The aim of the Fathers Transition Project was to engage fathers and male carers during the crucial period of their children's transition from an early years to reception class (both on the same site), in order to enhance their children's enjoyment, achievement and learning at this critical early stage of development. Prior to the project, there was little structured engagement of fathers/male carers in either the early years or the school settings.

## 2. Literature review

Below, we will discuss three areas of literature most relevant to the current study, namely the impact of father involvement on child outcomes, UK policy in relation to fathers and finally the importance of parental involvement in early learning transitions.

### 2.1 Father involvement and child outcomes

There is no doubt that in general, the active involvement of fathers in their children's lives promotes better child well-being and outcomes in a number of key areas. An analysis of 24 studies, [1] concluded that father engagement:

*reduces the frequency of behavioural problems in boys and psychological problems in young women; it also enhances cognitive development while decreasing criminality and economic disadvantage in low SES areas" (p.157).*

Early father involvement has also been found to be important in relation to later educational achievement, with father involvement at age 7 predicted educational attainment at 20, independently of the involvement of mothers [2]. In addition, there is now compelling evidence to demonstrate that father involvement in children's learning can be an important factor in enabling children from disadvantaged backgrounds to escape poverty later on in life [3]. However, and especially pertinent to the current project, research has found that fathers from a lower social class are less likely to be involved in children's out of school learning and education [4].

### 2.2 Engaging fathers: an overview of UK national policy and practice

Due to the increased awareness of the importance of fathers in relation to child outcomes, a large number of recent UK government legal and policy

frameworks require service engagement with fathers, such as: The Childcare Act (2006); The Gender Equality Duty (2007) and the 'Think Fathers' campaign (2009). However, a recent study found that whilst there was increasing recognition at policy levels, there remains little acknowledgement of fathers within *legislative* and *financial* frameworks, with hardly any requirement to monitor and evaluate the levels and nature of father involvement within services [5]. It is unsurprising therefore, that in relation to practice, the study's survey of 46 local authorities in England concluded that

*Father inclusive practice was not seen to be routine or mainstream in family services (p.6).*

Barriers to father engagement are significant and recorded as the feminised nature of early years and primary school environments; environments designed generally to meet the needs of mothers and children; a reluctance to work with men by some female staff, lack of sufficient training in working with men and inappropriate timing of activities for working fathers [5].

### 2.3. The importance of early learning transitions

Moving on to the importance of transitions, the importance of the transition from early years to primary schools settings has been identified as particularly important [6]

*The start of primary schooling has been perceived as one of the most important transitions in a child's life and a major challenge of early childhood. Initial success at school both socially and intellectually, leads to a virtuous cycle of achievement (p.2).*

A number of approaches have been found to be important in helping young children to negotiate this critical transition successfully, including the use of transitional activities and the active involvement of all of those involved including children, parents, early years and school settings [7].

## 3. Analysis of findings

Key research questions relevant to this paper were:

- What was the level and nature of father involvement in the target early years and school settings during the project?
- What were father perceptions of engagement in the project?

- Which strategies were most effective in engaging fathers?

To address these questions, we did the following:

- Collected and analysed attendance and activity data in relation to father involvement in both settings during the project
- Conducted 19 interviews in total with school based practitioners (x4); fathers and male carers (x7); staff from the expert agency (x6).

All interview and focus group data were transcribed and summaries were sent to each participant as a means of checking the trustworthiness of the data [8]. We employed a grounded theory approach, carrying out data analysis in three stages [9]. We coded general themes during the first stage, going on to then code several second order themes within these wider categories. Finally, we chose representative quotations from each second order theme to provide illustrative examples of the views of staff and fathers. In the findings below, father quotations are numbered to indicate the range of opinions (F1, F2 etc).

### 3.1. Level of father engagement during the project

The Fathers Transitions Project was successful in engaging fathers and male carers from diverse different family and employment backgrounds. During the period, 1<sup>st</sup> July 2008 to March 31<sup>st</sup> 2009, the total number of father/male carer attendances across all project activities during the nine month period was 76. The total number of fathers registered through the Transition Project during this period was 42, an important figure as generally fathers are rarely registered for UK services. Some fathers did become engaged in school based activities after their child's transition, with 19 male attendances being recorded at three school based activities. These figures represent impressive results, especially given the high level of deprivation in which it took place and the very limited timescales involved.

A number of strategies were identified as facilitating male engagement at both the strategic as well as the operational level and these are discussed below.

### 3.2. Financial support

The Transitions Project could not have taken place without the financial support of a local authority in the North East of England which has a strong history of supporting development work in relation to father/male carer inclusion. Funding for the a one year project was advanced.

### 3.3. Partnership working with an expert agency

The Transition Project was devised and implemented by an external charitable agency, expert in the field of male inclusion. The project was therefore able to draw on a range of in-depth knowledge and expertise developed by this agency over a ten year period.

### 3.4. A gender differentiated approach

Under the guidance of the expert agency, the project adopted a gender differentiated approach which is widely known to be effective in engaging men. Such a method recognises that men and women have different needs and interests and these will need to be addressed differently. This approach was enshrined within the legal framework with the introduction of the Gender Equality Duty (2007) which requires services to take account of the gender differences in the process of service delivery.

The Transition Project took as its starting point the need to introduce a specific focus on the role of fathers and male carers in the transition process. A dedicated worker was appointed to ensure that this focus was maintained and developed. As will be discussed further below, this was believed by all involved to be the key factor in developing the work.

### 3.5. Skills and abilities of the Fathers Transition Worker

At an operational level, the single biggest factor identified by fathers, male carers and staff as crucial in the development of the project was the professional skill of the dedicated Fathers Transition Worker. It is important to bear in mind that most of the fathers/male carers who became involved in the project had not been engaged with any type of service before.

A number of qualities were identified as being important in enabling the worker to interact successfully with men, namely approachability, friendliness, a respectful approach, trustworthiness, persistence, patience, the ability to listen and to talk to people as individuals. The ability to make relationships with fathers from an area where suspicion of services was often in evidence, may well have been one of the most crucial aspects of the Fathers Transition Worker's role. In this regard, it is important to note that the worker was from a cultural and socio-economic background similar to the one in which he was working. Even so, the task of engaging fathers in such areas requires very high levels of

expertise, particularly when working with men who have not previously engaged with formal services. Fathers and male carers were extremely positive about the Transition Worker's approach. One father commented on his friendliness and trustworthiness:

*"I think it is because [he] is welcoming, he is very friendly. As a bloke he talks at my level anyway. When he is speaking to you, he doesn't speak down to you, he doesn't talk over the top of you, and he always has time to listen to you. He is a friendly lad and maybe people confide in him...he is a good socialiser – he gets people involved – he has time for people and I think that's what it is" (F6).*

The worker's ability to communicate with people effectively was highlighted by another man:

*"[He] is a good bloke. I found it easy. [He] explains stuff in English – in plain English. No offence against people who have been to college and university but some professional people do not know how to explain stuff to ordinary people" (F5).*

A member of the school staff was impressed by the Project Worker's ability to engage easily with men in the very unstructured context of the playground:

*"To have somebody out there on the yard who can have a bit of banter with the dads and get them to come from over the wall to into the yard to into the school has been absolutely wonderful."*

The Fathers Transition Worker's respectful approach and dedication was also praised by staff, as well as his ability to interact easily with the local community:

*"He's very respectful and expects respect back – he's a lovely genuine man but he's a man's man as well – so the community here would warm to him because there's nothing to be offended by".*

It is well known that persistence is a vital ingredient in engaging and retaining fathers and male carers. Contact data provided above illustrates the worker's very high levels of perseverance. One member of staff commented:

*"He was the type of person who gets knocked back; if 25 people say no to him, it won't put him off. He would say if I have lost twenty-five but I have gained one, that's ok."*

### 3.6. Hook and male specific activities

The project used high interest, male specific 'hook' activities to draw men into the project during the summer months, with the aim of then encouraging them to take part in other activities

which would become more school related later on, during the autumn term. This strategy was successful in achieving this to some extent, with 19 attendances being recorded at school based activities later on.

Alongside the use of hook activities was the use of male orientated events, such as trips to a mine and shelter building on a forest trip, as well as a making a bird box. Fathers clearly enjoyed these activities. School staff felt that this emphasis on 'hands on, physical, dirty, outside type things' were important because it was then possible to present such activities as needing men to be involved, that men had something specific to offer on such events. One school staff member felt that this approach:

*"Boosted their self-esteem of actually being needed, because a lot of these dads don't work for a variety of reasons, including disability, so I think that's probably where he's won that battle that we couldn't have won."*

### **3.7. Face to face contact: valuing men**

Many would argue that the most important aspect of engaging fathers is initial recruitment or 'getting them through the door'. The question of how to contact men in such a way that they will then go on to take part in an activity, often for the first time, requires great skill. The Fathers Transition Worker stated that face to face contacts were by far the most effective in engaging men. The use of leaflets in settings during the summer did not recruit a single father. Initial contacts with men were often made in the school playground as men were dropping children off at the early years setting. The Fathers Transition Worker emphasised the importance of an informal, conversational approach where he was asking fathers for their help. Putting the men in the position of being an authority on their local area resulted in a respectful approach where men felt that their opinion was being valued.

*"You have to have the skill of being able to talk to people. You have got to show some interest in them. They have some value...so I am just making friends and asking for assistance and they appreciate that. So that is what I would do, asking them to help" (Fathers Transition Worker).*

This focus on respect and making relationships at an individual level with fathers was believed to be extremely important in developing trust between the worker and the fathers. It was seen as the first step in persuading men that they may want to engage in an activity which the Fathers Transition Worker was running.

As we saw above, fathers did respond very positively to this approach:

*"As a bloke he talks at my level anyway. When he is speaking to you, he doesn't speak down to you, he doesn't talk over the top of you, and he always has time to listen to you" (F6).*

The Fathers Transition Worker also met fathers in the local community by walking around the housing estates and chatting informally to men as they washed cars or in the Traveller community, were working on caravans (or trailers).

Such an approach is clearly time-consuming and expensive. However, this kind of community development based approach is known to be successful in engaging those who may not have been involved with services before, or for whatever reason may be suspicious of them. One father we spoke to admitted to being reluctant about becoming involved at first:

*"I was a bit wary at first...It's the way like dads are tret – you know what I mean..like they're an outsider – everything's for mams isn't it – you know there's nowt for fathers" (F3).*

Having become involved, his attitude changed and he became extremely enthusiastic about the focus on fathers which the Fathers Transition Worker had introduced to him:

*"I think it's fantastic – I said to [the Fathers Transition Worker] – how do I go about being a dad's worker? I want to be a dad's worker... getting involved in working with the children – getting the dads involved and that – I think it's brilliant." (F3).*

### **3.8. Retention: keeping men involved**

Once men have been engaged initially, there is then the difficult task of keeping them involved over time which can be an extremely time-intensive undertaking. The Fathers Transition Worker stated that a key strategy for retaining men is to maintain an on-going programme of activities, so that as soon as one event has taken place, the next father-friendly activity is quickly in view. To ensure that men stayed in contact, the Fathers Transition Worker followed up those who had been engaged with a series of intensive phone calls and texts. The total number of contacts with men made by the Fathers Transition Worker over the nine month period was 1360.

### **3.9. Working with mothers**

The Fathers Transition Worker also sought to engage fathers and male carers through working with mothers, another approach generally recognised as effective:

*"I would say [to the mothers], can you just fill it in and I will take it home. I would say these trips are on, and you will be invited as well. So I work through the mams."*

Once again, information from engagement records shows the level of on-going involvement with women, as well as men. Over the whole nine month period, 1260 contacts were made with mothers.

#### 4. Contribution to knowledge

The father engagement in children's early learning transitions achieved during the current project was brought about through the use of a highly gender differentiated approach employed by an extremely skilful dedicated Fathers Transition Worker. The fact that the worker grew up in a similar community to the one in which he was working appeared important in enabling the development of relationships, a phenomenon which has been discussed elsewhere [10]. Principal amongst the skills identified as critical to the worker's success were approachability, friendliness, a respectful approach, trustworthiness, persistence, patience, the ability to listen and to talk to people as individuals. In addition, the use of an intensive follow up strategy which involved frequent phone calls and text messages was believed essential in retaining men's involvement over time, as was the strategy of engaging with mothers as well as fathers.

#### 5. Conclusion

The Fathers Transition Project discussed here, charted relatively new territory within the UK, by successfully engaging a group of working class fathers from an area of high multiple deprivations in the North East of England during the crucial period of their children's transition from early years to the reception class. Such findings are very promising in the light of research demonstrating the importance of father involvement to later child outcomes [11] and the difficulty of engaging men in family services and school settings [12]:

*"Fathers [are] also more likely than mothers to report a history of school failure in literacy, a dislike of reading aloud and the use of strategies to shorten the time spent on reading with their children" (p.4).*

Having said this, it is important to acknowledge that success such as that achieved within this project comes at a price, witness the high level of on-going and intensive support required by the Fathers

Transition Worker to recruit, retain and support a relatively small number of men during this project.

Given the lack of ring-fenced funding for fathers work at a UK national level, it is likely that locally determined funding such as that allocated in the current project, must continue to be the main source of financial support for such work. This seems unfortunate given the scale of what remains to be achieved in this key area of practice. Although the scale of the work was necessarily small, early findings were very positive.

#### 6. Future work

The work discussed here took place within an area of disadvantage with a relatively small number of fathers. Clearly, further research is needed with a larger number of fathers to gain a greater understanding of which of the elements described are most important in doing so and to explore the potential impact of such strategies on fathers from different socio-economic and cultural backgrounds. In addition, as it seems unlikely that there will be sufficient funds for dedicated, experienced Fathers Workers in every area in the short to medium term, a model to train others already employed in relevant settings in fathers work seems indicated, together with an evaluation of the effectiveness of such a strategy. At a macro level, key aspects of successful work in including fathers in early years transitions needs to be embedded within the policy and practice of early years settings. Such an approach would require changes in national policy and funding frameworks, linked to rigorous accountability arrangements. As indicated earlier, the need for services to engage fathers is currently advised rather than prescribed. This must change if children are to accrue the benefits which are known to flow from father involvement in their lives, especially in the early years.

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# A Study on the Key Elements of Community-based Education Development in China

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## Abstract

*Community-based education is closely linked with everyone, no matter what particular community environment he/she is in, and people have been attaching greater and wider importance to it. Community-based education plays an irreplaceable function in implementing lifelong education, assisting school education, heightening the overall quality of the nation and constructing the learning-oriented society. Due to various reasons, the community construction in China is behind that of developed countries. The Chinese community-based education did not become the study focus until the mid and late 1980s, therefore, there are still many challenges. This study is going to probe into some of the major aspects.*

## 1. Introduction

In Certain Opinions on the Promotion of the Community-based education, the Ministry of Education recommended the establishment of a management and operating system with the following characteristics. Namely, the management and operating system should be under the overall leadership of the government, administered by the educational authority, with cooperation from relevant authorities and active support from the whole society. The community would arrange autonomous activities, in which the community members would participate extensively. In reality, how to put it into practice and how to solve the practical problems are crucial to the development of community-based education.

## 2. The allocation and utilization of the community-based education resources

Resources come in three forms. The first is teaching resources. We should make fuller use of current teaching resources and construct a new type of community-based education network and a platform of lifelong education. The second is personnel resources. We should construct a new management and teaching staff, which consists of part-time, full-time staff and volunteers, who need to adjust to the need of the community-based education

to guarantee the quality and appeal of community-based education. The third is financial resources. The dual functions of the government support and marketing mechanisms should be fully developed; we should adopt the means of “government allocates, society funds, units invest and individual contributes”, in which government allocation plays the main role in a multi-channel funding system. Efficient use of the limited available resources is essential to long-term sustainability of community-based programs.

## 3. The main contents and the channels of the community-based education

The main task of the community-based education is to develop the education training, especially those that are interest a wide group of the community residents. We should take the learning needs of the different demographics into account, including those of full-time staff, laid-off workers, senior citizens, vulnerable group, and immigrants. We should also choose and develop appropriate pre-school education, quality education for the youths outside the campus, at the same time, pay attention to the difference between the rural and urban areas, as well as the disparities among various regions. To strengthen the efficiency of the community-based education, we should meditate on the contents and formats of community-based education, develop and enrich education contents and create new educational forms.



# **BRINGING SCIENCE HOME: Case study of Environmental Rural Education in Wetlands along Lake Victoria Region, KENYA**

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## **Abstract**

*Lake Victoria is the second largest freshwater lake in the world surrounded by many wetlands and rivers. The lake is a shared resource within the tripartite communities of East Africa (Kenya, Uganda and Tanzania). Our emphasis is based on a case study of how to bring environmental stewardship home to the wetland communities and in particular Yala Swamp and Nyando Wetland. The process of conserving nature is a two-fold. There is the part of science and that of community based knowledge. It is very evident that decision making of knowledge gained in academic institutions if not brought back to the village might end up in reference libraries hence the aging of such skills. Bringing this knowledge back to the community is such a concept that has not matured well in many developing countries particularly rural areas. There is a wider gap between 'jargon of science world' and development on local knowledge in conservation of natural resources. The paper seeks to highlight in recent, how science is married to the local level in sustainable utilization of both Yala and Nyando Wetlands-Kenya. Achieving sustainable and just practice in environmental management has been a struggle between scientific and indigenous knowledge. The science of knowledge and technology are a resource that is very disproportionately distributed globally, where as the most marginalized are the rural communities. Scientific knowledge by itself is not sufficient. It is very evident that science cannot reconcile issues of values; relevant knowledge and appropriate values are mostly needed for effective decision making process. Successful societies in the past have generally developed using both science and traditional knowledge and combining these two is necessary for a continued and sustainable resource management. Apparently the message of sustainable development is not received widely at the grassroots levels. This may be due in part to educational approaches that act as a constraint. From the two wetlands community case studies, we have realized a paradigm need for new educational approach. Our main focus here was to borrow a leaf on requirements for sustainable development with a demand to foster cooperation*

*rather than open competition. The entire process of this study is aimed at letting the child discover her unique and potentiality rather than spending hours/years in academic institutions of acquiring skills for job competition without ploughing back the knowledge for the prosperity on natural resource management at the rural levels. The paper is driven by the fact it is better to feed the child before the chicken and not the opposite. This would be indeed a participatory and interactive knowledge base. Many 'doubting Thomases' have argued the effectiveness of rural participation. Our findings are clear indication that by popularity, community participation has made tremendous changes in policy making process and good governance in managing and conserving the wetlands which do account roughly 4-6 percent of world surface. In summary, we realized that a concerted effort should be based on the requirements of sustainable development and fostering cooperation. To bring science home we used the concept of bottom up approach.*

## **1. Introduction**

Friends of Victoria Wetlands is a community based organisation (CBO) operating in Western Kenya with offices in Kisumu at the shores of the giant Lake Victoria. The organisation was founded in 2002 primarily to cater for the missing links within massive wetlands along the second largest freshwater Lake Victoria in order to create a forum for local communities, both the scientists and laymen within the wetland catchment areas. Since its inception, the organisation has played an important role in creating educational awareness on wetlands issues affecting the region. The organisation is made up of volunteers from the local region and depends more on donor funds to cater for its project needs and functioning of the office.

**VISION:** to restore the dying wetlands along Lake Victoria for today and the day after tomorrow.

**MISSION:** to promote sound environmental management measures for sustainable utilization of wetlands resources within and around Lake Victoria.

#### STRATEGIES:

- Build the capacity of the local communities around Lake Victoria in order for them to become custodians of their own wetlands;
- Promote sustainable livelihoods for the communities;
- Lobby and advocate for sound environmental management policies and encourage the need for a wise use of wetlands resources;
- Engage the local schools in advancing and helping re-shape the school curriculum to include wetlands conservation as part of the subjects which currently is not the case.

## 2. The Scope of the Project

This project was initiated to help in restoring the lost glory of the wetlands along the catchment of Lake Victoria. It was meant to improve the knowledge of wetlands and wise use within the general public, decision makers, the private sectors and targeted focus groups. The paper reports on the activities carried out by the programme within the local communities; primary and secondary schools. It was also aimed at enabling direct training policies that are applicable at different levels by ensuring that a sustainable working mind becomes the hope for the local communities.

## 3. Methodology

Following many workshops and seminars organised from a variety of stakeholders, priorities and framework of actions were developed and embodied in the strategy document, which focused on:

- The existence of educational and training institutions interested in wetlands and which already offer training opportunities and themes (conservation, management practice);
- The existence of proven expertise in this field, and networks and advisory groups offering skills;
- The support of various international organizations for wetlands conservation; and
- Involvement of local stakeholders and schools in educating and creating public awareness activities.

## 4. Main Objectives

- Enhance awareness of the wetland values through education at local levels and training; and
- Provide support and tools for the practical implementation and education awareness activities at local levels.

## 5. Field Activities

The following field activities are included:

- Support of world wetlands Day celebrations (conferences, field trips, community soccer, dance, competition, TV shows);
- Regular production of awareness materials such as T-shirts, caps, posters and calendars; and
- Creation of local clubs and site guardians to build awareness of wetlands and threatened species.

## 6. Reaching out Local Community

Local communities interested in longer term actions focused on wetlands were formed based on locations through the leadership of local chiefs and clan elders as chairpersons to partner with Friends of Victoria Wetlands in creating sub-units centres. These offers local community with a wide range of cross-curricular activities centered on wetlands. At the moment, five local community groups are currently receiving funds where they have adopted local wetland initiatives. Some of these curricular initiatives have included range of studies in habitat conservation, art and craft, music, writing of essays in Swahili and translated in English and mentoring old women and men in wetlands studies to keep them busy and part of the growing team.

## 7. Type Programmes of Friends of Victoria Wetlands

Based on the background information, the conservation of wetlands within the community for day after tomorrow has not been an easy task. The organisation has mainly centred its interest through:

- Research based: Community conservation and leadership in the knowledge of wetland is one component in saving our wetlands for future generations to come. The organisation is hence committed to conserve an environmental resource and relies on the knowledge of science and combine with the traditional knowledge to guide its conservation activities. In collaboration with institutions of higher learning and other stakeholders, Friends of Victoria Wetlands helps the local communities to modify and evaluate wetlands conservation in the rural villages to meet the standard of wetlands conservation needs as defined. The research team ensures that all aspects of conservation priorities are effective and efficient; finding possible and workable answers to the local understanding quantify and establish the society wetland values in economic and societal need. Lastly the team ensures that the laymen become conservation experts at their standard.

- The general Public policy and habitat conservation: It is evident from the past experience that encouraging the general policy is very vital in saving our dying wetlands for many generations to come. Our research team ensures that an effective positive change and to bring wetland conservation to the forefront with all levels of science and locals is the driving force. The team focuses on finding and providing valuable information in comparing the mind-set (scientific and traditional) to harmonize wetland policies and strategies. To conserve these wetlands which are vanishing, a restoration of habitat is the key in rehabilitation.
- Bringing wetlands education from the Academic institutes to locals: being a pilot study, educating the locals about wetlands is the key part of Friends of Victoria Wetlands and it has enabled the success of most of the programmes take off. The main aim here is to educate one another both the scientist and local folks in teaching the future leaders and policy-makers values of wise use of wetlands resources.

## **8. Summary and Recommendations**

It is very unfortunate that our wetlands continue to vanish much as huge projects are carried in almost in all aspects. There is need to effectively communicate with the media, and ultimately educate the public and decision makers using facts. There is need to understand main problem facing wetland management in many countries and that some key resources have fallen into the hands of wealthy and politically connected folks. This has generated huge debate where the locals are deprived of their livelihood hence leading the fight on land ownership among range of issues. It is very evident that soon if a concerted effort is not put in place, all the freshwater wetlands along Lake Victoria will vanish leading to the next face of problems in the lake and change in climate. Following our drastic effort in creating incentives to the local community through “food for work”, the stakeholders have taken the need to partake a leading role in wetlands management measures and monitoring. In the long run, due to the poverty levels, the “food for thought” has worked beyond doubttable grounds. The success of such project throughout the country will bring a bright future in restoring wetlands as the community will take the lead role and voice their needs to benefit both stakeholders. Remarkably, the scientific knowledge is indeed not sufficient in nature conservation. We also have to realize that religion and science are complementary sources of knowledge.

# Cultivating Critical and Creative Thinking Skills through an Integrated Approach to the Teaching of Literary Texts

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## Abstract

*This research addresses the issue of critical and creative thinking skills (henceforth abbreviated to CCTS) in relation to Malaysian secondary school students. The aim of this study is to show how CCTS can be cultivated in the Malaysian secondary schools. The study advocates an integrated approach, an approach which combines the reader response theory and stylistic analysis to the teaching of literary texts as a method of cultivating CCTS among Malaysian students.*

## Introduction

The topic of critical and creative thinking skills has been debated extensively over the years. Academicians all over the world have accepted that the central goal of education is to help students learn how to think more effectively. Over the years there is evidence to show that CCTS are much needed in modern societies. Marzano claims that the success of any democratic system depends on the individual's ability to analyze problems and make thoughtful decisions [13]. Cotton asserts that in the twentieth century, the ability to engage in careful, reflective thought has been viewed in various ways: as a fundamental characteristic of an educated person, as a requirement for responsible citizenship in a democratic society, and, more recently, as an employability skill for an increasingly wide range of jobs [3].

The awareness as to the need to cultivate CCTS among students in Malaysia has been an issue of concern to many. Literature in English has been chosen from the many subjects offered in the Malaysian curriculum as a suitable base to inculcate CCTS for two reasons. Firstly, literature in English can be seen to cut across the various subjects in the curriculum as the contents of literary texts are so diverse that they incorporate social, political, scientific, technological, medical and all other areas of life. Secondly it is an undeniable fact that literature plays an important role in the Malaysian curriculum since it is now being taught to students from Form 1 to Form 5 as a component of the English Language syllabus. Malachi Edwin (1992) stated that literature in English besides developing

reading skills will also help develop students' critical thinking skills. He adds that these skills will in turn provide students opportunities to understand themselves and their fellow human beings better. Ganakumaran S. gives further illustration as to why literature is a suitable subject for cultivating CCTS [5]. He claims that "in literary reading we are engaged with the multitude of possibilities underlying the aspects we are reading [and that] this engagement leads us to the realm of explorations of how the various elements of the texts – language, style and content – lead us through a wondrous journey of interpretations of the entire work". Thus, there is no doubt that the very nature of the subject which requires analysis and interpretation in itself encourages critical and creative thinking.

As an alternative solution to the current situation in Malaysia in terms of insufficient development of CCTS among students, this study hopes to establish that the use of a reader response theory and a stylistic analysis as a method of approach to literary texts will specifically be effective in cultivating critical and creative thinking skills. These modes of teaching and learning literature start on a premise that readers construct meaning to texts differently and thus are empowered to interact on a direct and personal level with the texts. In doing so, they become personally involved in the investigating process and in this process they will think both critically and creatively. It is believed that the reader response approach assigns the reader/learner with a dominant role in the meaning making process while the stylistic approach focuses on the text itself i.e. focuses on words on the paper and leads on to make textual discoveries. Further the stylistic approach also conforms to the current language teaching theory and practices as the focus is more on the process of language learning and the learner [19]. Both the stylistic analysis and reader response approach blends well and is suitable for instilling CCTS among Malaysian students. Under this integrated approach, the whole classroom becomes a site for interactive process and the teacher does not take a dominant role and students take responsibility of their own learning. Thus, the study attempts to prove the hypothesis that an integrated approach to literary text will ensure the cultivation of CCTS more effectively among students.

## 2. Aim of Study

The aim of the study is to investigate the levels of CCTS among Malaysian students and to prove the effectiveness of the integrated approach for instilling CCTS. For this purpose, the researcher used an adapted Bloom's taxonomy [1] named Cogaff taxonomy by Ghazali Mustapha [8] which combines the cognitive and affective thinking skills. The affective level which is added to the six existing thinking levels in Bloom's taxonomy is used in this thesis with a slight change of focus. Ghazali Mustapha has listed the affective level at the peak of Bloom's taxonomy. The researcher however has modified the Cogaff Taxonomy as the affective domain is shown to be in existence more with the higher order thinking skills starting from the application level.

The reason for the researcher's placing the affective domain as existing from the application domain is based on Rosenblatt's claim that there are two stances to the reading of literary texts [15]. The difference between the two stances is that efferent reading requires learners to identify meaning while aesthetic reading requires reactions to the meaning being constructed [17]. At the knowledge and comprehension level, there is more efferent reading while from the application level onwards; there is aesthetic reading which requires learners to react to the texts. The researcher considers the affective domain to be on the same line as the aesthetic reading for it involves stirring of personal feelings, ideas and attitudes that lead to new experiences. Rosenblatt asserts further that the aesthetic stance involves a transition between the reader and the text as the reader crosses over and enters into the world of the text to experience the story, events and situations [16]. However at the knowledge and comprehension level there is mere understanding with no focus on personal feelings. At these levels, the reader does not see herself as living through a literary character which is required at the aesthetic level of reading [18]. The researcher has named the new taxonomy as the Critical and Creative Thinking (CCT) Taxonomy which is shown in Figure 1.

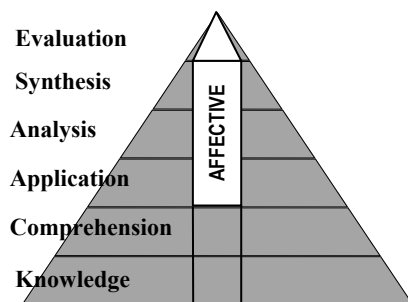


Figure 1. Creative and Critical Thinking Skills (CCTS) Taxonomy

## 3. Integrated Approach

An integrated approach is an excellent approach to the teaching of literary text in the Malaysian context as both stylistic and reader response are theories that blend well due to their natural characteristics of being extremely flexible but 'yet anchored in the sound theories of the established disciplines of linguistic and pragmatics' [7]. It can be concluded that reader-response approaches as we have seen would enlist a variety of interpretation but with stylistics in play, readers would follow some similar interpretive conventions. The process of reader-response and stylistic approaches to literature can be seen in Figure 2.

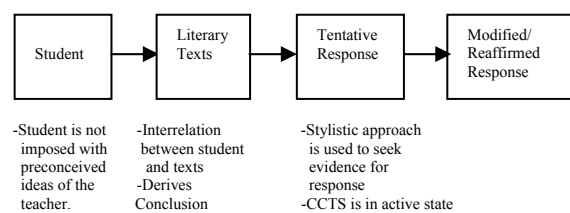


Figure 2. Integrated Approach Process

The process of the integrated approach as shown in Figure 2 explains how the two approaches blend to form a complete whole. As we know reader response theory and stylistic analysis can be considered as approaches to literary analysis which stress on the importance of the participating reader. The integrated approach is an activity based approach. Students learn more when opportunities for learning increase, when they are actively engaged in activities, and when they are relatively successful in solving the problems. Thus the use of the integrated approach will definitely create work settings that approach and support better learning.

## 4. Methodology

This study aimed to show that currently there is a serious lack of focus on developing CCTS among Malaysian students. Even if there is focus, they remain at the lower levels of thinking order based on the CCT Taxonomy which is adapted from Bloom's and Cogaff Taxonomy, which is used as a basis for testing students' levels of thinking skills. Thus, a quantitative research design by way of an experiment inclusive of a pre-test and post-test was carried out to establish this phenomenon. The tests were to establish the difference in levels of CCTS among Malaysian students and to establish that an integrated approach results in a higher level of CCTS.

To furnish a more convincing foundation for estimating the success of an integrated approach, the researcher's final evaluation is based not only on the

post-test scores, but on the extent of change from pre-test to post test. The researcher first gave a pre-test on the texts studied to evaluate how far CCTS has been instilled in them. The test was designed by the researcher using the adapted Bloom's taxonomy. Subsequently, the researcher conducted classes using a framework designed based on the integrated approach after which a post-test was given. The questions in both the pre-test and post are the same. The design used in this experiment shows in Figure 3.

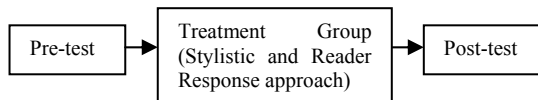


Figure 3. Pre and Post-test Design

The advantage of this design was that it enabled the researcher to compare the apparent effectiveness of an integrated approach to the teaching and learning of literature to cultivate CCTS. The data was then analyzed using the ANOVA to test the experiment results as the researcher found it to be a comprehensive method to identify the difference within the groups in terms of pre-test and post-test.

#### 4.1. CCTS Test

The CCTS Test was designed by the researcher and is a two-tier test which consisted of both structural and essay questions. A total of 16 structural questions were designed to test the 6 levels of critical and creative thinking skills. The questions correlate with the levels of thinking being tested. The second part consists of two essay questions, the first designed to test the critical thinking of the students while the second tests the creative thinking skills of the students. In the first essay, students were required to illustrate how studying literature has benefited them. To answer this question, students have to illustrate their answer with evidence from the texts studied in Form Four. At this point, students' ability to analyze texts at a critical level is tested. The second essay tests the students' creative thinking level as the question requires students to choose the theme in one text and subsequently write their own short story. This question tests students' ability to apply what they had studied in a new context i.e. the insight and innovation level. According to Bloom [1], at these levels, students are tested on their ability to explore ways to confront complex situation, put new ideas into practice as well as generate alternate ideas and approaches to solving problems.

#### 4.2. Sampling

There are various methods of sampling. Among these would be simple random sampling, systematic sampling, stratified sampling, cluster sampling, stage

sampling, convenience sampling, quota sampling, purposive sampling, dimensional sampling and snowball sampling (Cohen & Manion 1980). For the purpose of this thesis, a purposive sampling was used whereby two schools from two different states were used. The schools selected from both the rural and urban areas were done with the intention of getting a holistic response. By selecting schools from different geographic location, it was hoped the responses will be more accurate and reliable.

In purposive sampling, the sample was handpicked to show that typicality exists in the sample selected. The diverse background of students was selected for the aim of the researcher is to convey the point that there is a current lack in CCTS among Malaysian students immaterial of location and an integrated approach will overcome this. Another reason for the selection of different environment was also to establish the fact that difference in culture, environment, religion and any other difference will not be a hindrance to the adoption of this new integrated method of teaching for cultivating CCTS.

Although a purposive sampling was used in terms of schools selected, a random sample was used in selecting the 25 students in the respective classes. A random sample invokes what is called probability sampling which means every member of the population has a non zero probability of being selected for the sample [20]. This type of sample is small and yet it as representative of the population from which it was selected. The survey results come from approximately 25 students from the urban school and 25 students from the rural school, totaling up to 50.

### 5. Findings and Discussion

The Figure 4 shows the results of the pre and post-test results of treatment group in the rural school.

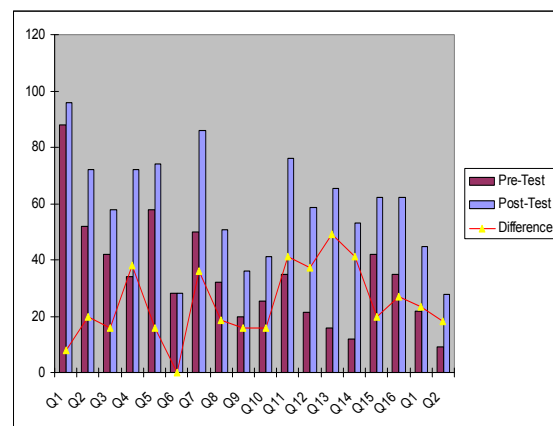


Figure 4. Pre and Post Test Results of Treatment Group (Rural School)

The Figure 4 presents the sample taken from the treatment group in rural school. For Question 1, the pre-test entry is 88.0, and the post-test entry is 96.0. The variance (difference in means) between the two tests values is 8.0, which is an inclined value. For Question 2, the pre-test entry is 52.0, and the post-test entry is 72.0. The variance between the two test values is 20.0. For Question 3, the pre-test entry is 42.0, and the post-test entry is also 58.0. The variance between the two test values is 16.0. For Question 4, the pre-test entry is 34.0, and the post-test entry is 72.0. The variance between the two test values is 18.0. For Question 5, the pre-test entry is 58.0, and the post-test entry is 74.0. The variance between the two test values is 16.0. For Question 6, the pre-test entry is 28.0. There is no variance between the two test values. For Question 7, the pre-test entry is 50.0, and the post-test entry is 86.0. The variance between the two test values is 36.0. For Question 8, the pre-test entry is 32.0, and the post-test entry is 50.7. The variance between the two test values is 18.7. For Question 9, the pre-test entry is 20.0, and the post-test entry is 36.0. The variance between the two test values is 16.0. For Question 10, the pre-test entry is 25.3, and the post-test entry is 41.3. The variance between the two test values is 16.0. For Question 11, the pre-test entry is 34.7, and the post-test entry is 76.0. The variance between the two test values is 41.3. For Question 12, the pre-test entry is 21.3, and the post-test entry is 58.7. The variance between the two test values is 37.4. For Question 13, the pre-test entry is 16.0, and the post-test entry is 65.3. The variance between the two test values is 49.3. For Question 14, the pre-test entry is 12.0, and the post-test entry is 53.0. The variance between the two test values is 41.0. For Question 15, the pre-test entry is 42.0, and the post-test entry is 62.0. The variance between the two test values is 20.0. For Question 16, the pre-test entry is 35.0, and the post-test entry is 62.0. The variance between the two test values is 27.0.

The results of Section B were also similar to the findings of Section C. The first level tests the critical thinking skills of the student. For Question 1, the Pre-Test entry is 21.6, and the Post-Test entry is 44.8. The variance between the two test values is 23.2. The second level tests the creative thinking skills. Under this levels, one question was posed; Q2. For Question 2, the Pre-Test entry is 9.2, and the Post-Test entry is 27.6. The variance between the two test values is 18.4.

### 5.1. Analysis of Between Group Differences in Scores of Treatment Group (Rural School)

Repeated measure analysis of variance (ANOVA) was conducted and the table below shows the findings.

Table 1. Comparison of levels of CCTS between pre and post-test results of rural treatment group

Treatment Group (RURAL)	Mean	Standard Deviation	F	p (0.01)
Pre-Test	34.51	13.76	14.96	7.44
Post-Test	59.08	13.60		

Null Hypothesis 1: There is no significant improvement from the pre and post test results of the treatment group in the rural area (see Figure 5).

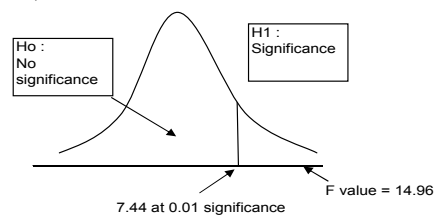


Figure 5. Null Hypothesis 1

The mean of rural treatment is 34.51 for pre-test and 59.08 for the post-test (with a difference of 24.57). The test results show that there is a significant difference in scores for the pre and post-tests from the rural treatment group ( $F = 14.96$ , which is  $> 7.44$  for  $p > 0.01$ ). Therefore, this study should reject null hypothesis 3. There is a significant improvement in the performance of the pre and post-test of the treatment group in the rural area.

### Experiment Results of Treatment Group (Urban School)

The Figure 6 shows the results of the pre and post-test results of treatment group in the rural school.

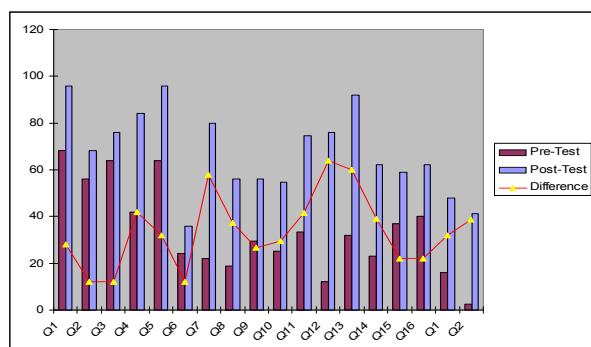


Figure 6. Pre and Post Test Results of Treatment Group (Urban School)

The Figure 6 presents the sample taken from the treatment group in an urban school. For Question 1, the pre-test entry is 68.0, and the post-test entry is 96.0. The variance between the two tests values is 28.0, which is an inclined value. For Question 2, the

pre-test entry is 56.0, and the post-test entry is 68.0. The variance between the two test values is 12.0.

For Question 3, the pre-test entry is 64.0, and the post-test entry is also 76.0. The variance between the two test values is 12.0. For Question 4, the pre-test entry is 42.0, and the post-test entry is 84.0. The variance between the two test values is 42.0.

For Question 5, the pre-test entry is 64.0, and the post-test entry is 96.0. The variance between the two test values is 32.0. For Question 6, the pre-test entry is 24.0, and the post-test entry is 36.0. The variance between the two test values is 12.0. For Question 7, the pre-test entry is 22.0, and the post-test entry is 80.0. The variance between the two test values is 58.0.

For Question 8, the pre-test entry is 18.7, and the post-test entry is 56.0. The variance between the two test values is 37.3. For Question 9, the pre-test entry is 29.3, and the post-test entry is 56.0. The variance between the two test values is 26.7. For Question 10, the pre-test entry is 25.3, and the post-test entry is 54.7. The variance between the two test values is 29.4. For Question 11, the pre-test entry is 33.3, and the post-test entry is 74.7. The variance between the two test values is 41.4. For Question 12, the pre-test entry is 12.0, and the post-test entry is 76.0. The variance between the two test values is 64.0.

For Question 13, the pre-test entry is 32.0, and the post-test entry is 92.0. The variance between the two test values is 60.0. For Question 14, the pre-test entry is 23.0, and the post-test entry is 62.0. The variance between the two test values is 39.0. For Question 15, the pre-test entry is 37.0, and the post-test entry is 59.0. The variance between the two test values is 47.0. For Question 16, the pre-test entry is 40.0, and the post-test entry is 62.0. The variance between the two test values is 22.0. Section D of the Survey showed similar results. The first level tests the critical thinking skills of the student. For Question 1, the pre-test entry is 16.0, and the post-test entry is 48.0. The variance between the two test values is 32.0. The second level tests the creative thinking skills. Under this taxonomy, one question was posed; Q2. For Question 2, the pre-test entry is 2.4, and the post-test entry is 41.2. The variance between the two test values is 38.8.

The results indicate the effectiveness of the integrated approach. The results of the post test of both groups show a significant increase. In the case of the rural school, the post-test results showed an increase ranging from 0% to 49.3%. Similarly the post-test results of the urban school showed an overall increase ranging from 12% up to 64%. The large range in difference indicates the effectiveness of the method.

In both results a significant finding is that Q6 in the application level did not show any increase in the rural school while portrayed a small percentage of increase in the urban school. The increase was the

second smallest increase i.e. 12%. The reason for this lies in the question itself which was flawed.

## 5.2. Analysis of Between Group Differences in Scores of Treatment Group (Urban School)

Repeated measure analysis of variance (ANOVA) was conducted in the same manner to that conducted for the treatment group in the rural school and the table below shows the findings.

Null Hypothesis 2: There is no significant improvement from the pre and post test results of the treatment group in the urban area (see Figure 7).

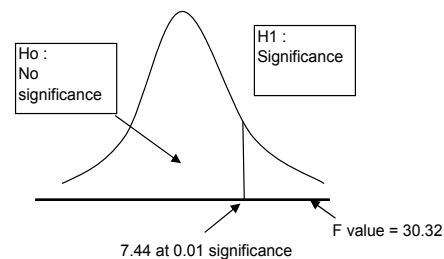


Figure 7. Null Hypothesis 2

The Table 2 shows the mean of urban treatment at 33.84 for pre-test and 67.64 for the post-test (with a difference of 33.80). The test results show that there is a significant difference in scores for the pre- and post-tests of the urban treatment group ( $F = 30.32$ , which is  $> 7.44$  for  $p > 0.01$ ).

Table 2. Comparison of levels of CCTS between pre and post-test results of urban treatment group

Treatment Group (URBAN)	Mean	Standard Deviation	F	P (0.01)
Pre-Test	33.84	13.55	30.32	7.44
Post-Test	67.64	12.88		

Therefore, this study should reject null hypothesis 3. As stated above, there is a significant improvement in the performance of the pre and post-test of the treatment group in the urban area.

## 6. Conclusion

This study represents an attempt to evaluate the level of CCTS among Malaysian students and at the same time propose and integrated approach to the teaching of literary texts to inculcate and enhance the level of CCTS. The researcher believes strongly that the need to cultivate CCTS and improve the level of English proficiency among Malaysian students can be done by employing the integrated approach to literary texts.



The research shows that other approaches to teaching literary texts do in general have the ability to inculcate CCTS among students but it is only at the lower levels as proven by the pre-test results. Though many strategies or techniques or modals have been developed to help facilitate growth in critical and creative thinking, the strategy advocated in this thesis provides a framework on which meaningful, extending activities can be built and from which questions can be formulated that allow students to relate to literary texts and discover meaningful connections with their own lives. The ANOVA results has clearly proved that the integrated approach does inculcate CCTS more effectively than the other methods employed by the teachers. The findings of both the rural and urban schools were consistent. The results proved that the integrated approach can be used for students of both high level and low level English proficiency.

The conclusions drawn from the findings of the present study may be significant in throwing light on how to inculcate and enhance CCTS in a more effective manner. It is strongly believed that employing an integrated approach to the teaching of literary texts would not only inculcate and enhance CCTS but in the long run have a positive impact on students' overall academic achievement.

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## **Session 32: Teacher Education, Education Policy and Leadership**

Quality School Resource Centre: the Beacon of Quality Education  
(Ahmad Bakeri Abu Bakar, Wahidah Mohd Zain)

The Latvian Example for Search of Supervision Implementation Solutions in Education of Prospective Social Pedagogues  
(Zenija Truskovska, Velta Lubkina, Inese Patapova)

The Effect of Self-Esteem and Competency of Classroom Research Promotion Program on Professional Development Process of Teacher Trainees  
(Bunsit Chaichana)

Collaborative Action research: A Means for Facilitating Professional Development among Non-Native English Language Teachers in Macao  
(Laurie Baker-Malungu)

# Quality School Resource Centre: the Beacon of Quality Education

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## Abstract

*The quality of education in schools is closely linked to the quality of the School Resource Centre. The study examines the responses of 258 students with regards to the attributes of quality of School Resource Centre which include the qualities of collection, services offered, performance of staff, facilities provided and environment for study. The students were found to react positively to the quality attributes of the School Resource Centre. However, they noted that the School Resource Centre was not “proactive” in promoting the students to visit them especially during the school holiday.*

## 1. Introduction

Schools have the continuous task of educating the nation for the future. “Nowadays, education has shifted from being teacher-centric to student-centric. In other words, from directed instruction to active learning, knowledge discovery and construction. Foo [2]” suggested that school libraries have to implement and integrate effective programs into the school curriculum so as to provide a more holistic learning experience for the students. He added that the school library plays a critical role in “supporting the new age of education”. This was also reiterated by Manzo who stated that “the central and fundamental role and function of the school library cannot be denied nor undermined, especially when teaching and learning is involved [6]”. The school library or the school resource centre is no longer being a collection warehouse; the focus has changed to engaging students in pursuing knowledge within and beyond a formal curriculum. Jones discovered that “school resource centre programs have changed in focus from collections to programs to instruction and finally, to learning [5]”. The quality of school resource centre programs is inextricably linked to the quality of education offered in the school. All these show that quality of education can be upheld if the school library programs are not compromised in terms of quality of their attributes. These attributes can be in the form of collection, services, staff performance, facilities and environment surrounding the school research centre.

Henceforth, there is a need to determine to what extent has a particular school resource centre being given a seal of approval by the students as to the conduct of its affairs. In other words there is a need to determine the quality of the school resource centre. This could be accomplished if an evaluation study is performed on the school resource centre. As Glasser pointed out that “the success or the failure of our lives is greatly dependent on our willingness to judge the quality of what we do and then to improve it if we find it wanting [3]”.

The Malaysian Ministry of Education has put their focus and efforts in order to improve the quality of education in Malaysia. In the Ninth Malaysian Plan, one of the agenda is ‘Increasing the capacity for knowledge’ with the view towards ‘Making national schools the “School of choice”’. This agenda places more emphasis on the curriculum and co-curriculum activities in schools in order to ensure a solid foundation for basic competencies. It is also to ensure that they are in line with the current human resource demands of the country. Many steps have been taken by the Malaysian Ministry of Education in improving the quality of education in schools including implementing the Education Development Master Plan (EDMP) 2006-2010 which was launched in January 2007. One of the six national core missions outlined is to develop a quality and world class educational system. Among the approach that can be taken at the school level is to increase the quality of the School Resource Centre. A quality School Resource Centre provides adequate and efficient resources for the teachers and students in teaching and learning and facilitates the teachers and students to translate high standards in the process of teaching and learning and eventually, assist with their achievement. In Malaysia, the Educational Technology Division (BTP), under the Ministry of Education is responsible to monitor the development of the School Resource Centre (SRC). The division has implemented their strategies to develop the SRC in Malaysia including providing the guidelines of SRC management, trainings to all teacher librarian and library staff and many more. They have also come up with evaluating scheme as well as set up minimum standards that a School Resource Centre should achieve. However, the issue arising is whether the development of the SRC is really

capable in moving towards achieving the mission of providing a quality education? How do we define a quality resource centre? Is it only by having a quality SRC from the perspective of the management is enough to define a quality SRC? Are the existing SRCs which are considered as quality SRCs by the existing standards are equipped enough with the appropriate programs, facilities and services to the users? To what extent does the SRC users especially students played in determining a quality resource centre?

Numerous studies conducted from all over the world mandated that quality be defined from the users or customers' viewpoint which should serve as the benchmark for the evaluation of service deliveries. In Malaysian context, students' perceptions of the SRC are not yet playing a vital role in the development of a quality SRC and limited research has been conducted regarding the perception of the students towards the programs and services provided by their SRCs, hence the lack of understanding of this issue. It is hoped that this study could contribute to the understanding of the role of students in developing a quality School Resource Centre in schools in Malaysia. By understanding the situation, appropriate recommendations can then be made to improve SRCs in line with the mission.

## 2. Purpose of Study

The aim of the study is to determine the students' perceptions of the quality of their School Resource Centre. The study will be focusing on the questions of quality of the collection, quality of the services offered, quality of services provided by the library staff, quality of facilities available and the quality of the environment for study in the School Resource Centre. In this study quality of collection is measured by the presence of library materials that are in good physical condition, updated and able to serve the needs of the students whose range of ability, both reading and intellectual, are varied. Quality of services is measured by answering the query of each and every student accurately, exhaustively and expeditiously. Quality of services provided by the library staff is measured based on the product of warm, caring human relationships between the library staff and the students. Quality of facilities available is measured by extent of the tangible facilities in facilitating the process of study, in creating comfort to the students and in encouraging students to learn. Quality of the environment for study is measured by the extent that the ventilation, heating, air conditioning, the interior design of the School Resource Centre provide conducive study environment for the students.

It has been shown from studies done in other libraries such as academic libraries, that the users do play an important role in determining the quality of a

library. "Although most users do not have full understanding of the complexities of library systems, in order to implement customer-based changes, library staff must accept user perceptions as valid statements of how patron feels, Jankowska, Hertel, & Young [4]". But School Resource Centre, perhaps unlike other types of libraries, cannot be judged independently from the school in which they exist, because they are inextricably linked. As emphasized by Stripling "the success of the School Resource Centre depends on the quality of education offered in the school [7]".

## 3. Methodology

In this study a self-constructed questionnaire was used as the data gathering instrument. "This questionnaire was developed by the researcher based on the adoption and modification of the elements extracted from the United States of America School Library Department that was used in evaluating the School Library Media Centers as reported by Everhart [1]". Out of 295 sets of questionnaire that were distributed, 258 questionnaires were answered completely by the students. Thirty seven questionnaires were discarded due to reasons such as unclear or uncertain answers or missing pages. The students participating in this study were drawn from the Sungei Pusu High School in the District of Gombak, Selangor. The students participants were chosen from three forms (Form One, Form Two and Form Four). The responses to each item in the questionnaire are in the form of five point Likert scales of "strongly disagree", "disagree", "undecided", "agree" and "strongly agree". Ten questions were asked for each category. The questions covered all the relevant information needed to examine students' perceptions on the quality of their School Resource Centre.

## 4. Results

The Table 1 shows the results of the analysis in descending order of "agree" percentage. From the Table, eight of the statements were agreed by more than half of the total number of the respondents while less than half of the total number of the respondents agreed that their SRC owns consistently updated resources (43.1%). Although most of the respondents agreed that their SRC has good collection of library materials, the results show that the collection did not really met the expectation of the students as the statement "Majority of the resources that I expect to get from the SRC is available" scored less than fifty percent of respondents who has agreed (43.8%).

Table 1. Quality of collection at the School Resource Centre

Statements	Disagree	Neutral	Agree	Total
My SRC has good collection materials	10.1 %	7.4 %	82.5%	100%
I can easily find the materials that suit my level of knowledge	7%	10.5%	82.5%	100%
The collection materials of my SRC are appropriate and support my school curriculum	5.1%	13.2%	81.7%	100%
The collection available in the SRC is relevant to the users	8.2%	16.3%	75.6%	100%
My SRC has a quality collection	10%	14.7%	75.3%	100%
The collection is always in a good condition and ready to be used	18.6%	11.6%	69.8%	100%
The quantity of each title available in my SRC is relevance to its usage	12.85%	19.8%	67.4%	100%
The resources that my teacher use from the SRC for her lessons is also accessible for students	7%	26.7%	66.3%	100%
Majority of resources that I expect to get from the SRC is available	26.7%	29.5%	43.8%	100%
My SRC owns consistently updated resources	24.1%	32.9%	43.0%	100%

The Table 2 shows the students' responses to the quality of services offered by the SRC. Generally, most of the students agreed that the SRC does promote and encourage the students to use the resources in the SRC through programs such as book exhibition, National Reading Program and other events. About 84.5 percent of the total number of respondents agreed with this statement. As shown in the Table the highest score of disagreement, 22.9 percent of the total, was with the statement "My SRC opening hours is flexible during the school holidays". Thus it reveals that the SRC has some shortcoming in the opening hours during the school vacation.

Table 2. Quality of services at the School Resource Centre

	Disagree	Neutral	Agree	Total
My SRC does promote and encourage students to use the resources	3.5%	12%	84.5%	100%
My SRC opening hours is convenient	10.5%	12.8%	76.8%	100%
The system used in using and borrowing materials is helpful and practical	5.1%	18.6%	76.3%	100%
The services provided by my SRC help me prepares my homework	9.7%	14.3%	76%	100%
My SRC does provide quality services	9.7%	14.7%	75.6%	100%
I can borrow materials easily from my SRC	12.4%	14.7%	72.9%	100%
The duration of borrowing materials from the SRC is relevant and practical	11.7%	20.9%	67.4%	100%
I can find the needed materials easily, accurately without wasting any time	22.9%	12%	65.1%	100%
The programs offered by my SRC provide opportunity for me to improve the skills to find relevant information efficiently	11.6%	26.7%	61.6%	100%
My SRC opening hours is flexible during school holiday	22.9%	44.6%	32.5%	100%

The Table 3 below shows the quality of services provided by the library staff. The students responded positively to the quality services offered by the library staff as their responses are above fifty percent, ranging from 53.5 percent to 63.2 percent. The statement that received some disagreement is related to the responses "Assistance in using my SRC is readily available" at 22.1 percent, as well as the statement "My SRC staff guides the students in the selection of appropriate resources to be used" at 19.8 percent. The findings indicate that it would have been better if the library staff are available most of the time when the students need their help especially to guide the students in selecting the resources available in the SRC that suit their level of knowledge. Lack of staff or the staff themselves did

not perform satisfactorily might be the reasons that lead the students to respond as reported.

Table 3. Quality of services at the School Resource Centre

	Disagree	Neutral	Agree	Total
My SRC does provide quality services by the staff	17.5%	19.4%	63.1%	100%
When I have received assistance, I feel welcome to return for more help	15.9%	21.7%	62.4%	100%
My SRC staff are knowledgeable about the SRC resources and services	9.7%	28.7%	61.6%	100%
My SRC staff communicate with me in ways that is clear and understandable	19%	20.2%	60.8%	100%
My SRC staff helps students to develop habits of independent reference work	16.3%	23.6%	60.1%	100%
My SRC staff appreciate the users and show enthusiasm for the profession	19%	20.9%	60.1%	100%
My SRC staff guide the students in the selection of appropriate resources to be used	19.8%	22.1%	58.1%	100%
Assistance in using my SRC is readily available	22.1%	21.7%	56.2%	100%
If my problem can not be resolved immediately, I can depend on staff to provide follow up	18.3%	26.7%	55%	100%
My SRC staff are able to answer my questions regarding the SRC accurately	19.7%	26.7%	53.5%	100%

The Table 4 shows the results of the quality of facilities provided by the SRC. Again the students responded positively to the facilities provided by the SRC. All the scores were above fifty percent except for the statement “I can access the computer and Internet easily in my SRC” which received thirty three percent. The reasons for this might be due to the fact that there are not enough computers with Internet connections in the SRC.

Table 4. Quality of facilities at the School Resource Centre

	Disagree	Neutral	Agree	Total
My SRC has appropriate furniture for the users	10.9%	11.2%	77.9%	100%
I can always find a place to sit and do my work properly	11.7%	12%	76.3%	100%
I can find enough facility to do my homework in the SRC (eg. Photocopier,et)	9%	15%	76%	100%
My SRC does have quality facilities	12.8%	14%	73.2%	100%
The SRC has provided appropriate signage to help the users	9.7%	17.4%	72.9%	100%
The facilities provided in the SRC are always in good condition	15.5%	15.9%	68.6%	100%
My SRC provides enough space and facilities for the students to do their work for hours without moving to another place	17.8%	18.2%	64%	100%
My SRC do provide a proper place for me to place my belongings	25.2%	14%	60.8%	100%
The number of facilities is appropriate with the number of users	20.6%	22.1%	57.3%	100%
I can access to the computer and internet easily	40.7%	26%	33.3%	100%

Table 5 shows the results of the environment for study at the SRC in which all the students agreed that the SRC provides quality study environment. However, a number of respondents felt that the SRC has not met their needs in terms of providing variety of design and suitable spaces for them to study. The reasons for this response might be due to the limited spaces of the SRC itself as well as the growth in the collection and growing number of students in the school.

Table 5. Quality of environment at the School Resource Centre

	Disagree	Neutral	Agree	Total
Has appropriate air ventilation	8.6%	8.9%	82.5%	100%
Environment of SRC is healthy and safe	7%	10.9%	82.1%	100%
My SRC provides a quality study environment	8.1%	10.1%	81.8%	100%
Has appropriate lighting for study	9.3%	13.2%	77.5%	100%
Does provide varieties of design of spaces for study	15.1%	7.8%	77.1%	100%
	Disagree	Neutral	Agree	Total
I can pay attention to my study when I am in SRC	13.9%	10.5%	75.6%	100%
I like the study environment	10.9%	14%	75.1%	100%
Space is suitable	13.2%	13.2%	73.6%	100%
Does assist me in using the spaces provided effectively	8.6%	18.6%	72.8%	100%
The environment encourages me to study	9.7%	21.3%	69%	100%

## 5. Conclusion

The study revealed that the students were found to react positively to the quality attributes of the School Resource Centre. They found most of their needs for studying are met by the SRC whether they are in terms of collection, the services provided by the SRC, the services provided by the library staff, the facilities available for study and the conducive

environment of the SRC. Obviously there are some problems which require some solutions by the management of the SRC such as reacting proactively to some of issues as in the case of opening hours during vacation time and also the lack of computers with internet connections. Only when quality is taken into consideration in the running of the SRC that quality education for the students can be assured.

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# The Latvian Example for Search of Supervision Implementation Solutions in Education of Prospective Social Pedagogues

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## Abstract

*The report offers implementation sample of innovative approach within Latvian socio-economical and educational context for educating of prospective social pedagogues. It is a qualitative research, being carried out in Rezekne Higher Education Institution (RHEI) within the framework of doctoral thesis. The main aim of the research is to substantiate professional education of prospective social pedagogues in Latvia, exactly in Latgale region – supervisions as context of consultative support implementation into study process, implementation context of positive foreign and national practice in educating of prospective professionals. The research is based on ideas of Latvian and foreign scientists. Many supervision definitions accentuate the educating aspect of supervision. Sonia Zong stresses that regular professional development is obligatory standard for modern professional workers and that supervision could be considered as one of the methods, passing on down professional knowledge, skills and values. RHEI grooms Professional social pedagogues, and there is being supported innovative ideas for diversification of study process. Report reflects the real situation of Latvia, Latgale region and RHEI, where social work and educating of professionals of social work is dynamically developing, accordingly to variable demands of globalization period.*

## 1. Introduction

In Latvian public space and Professional environment of specialists of social work the discussion regarding supervision (author's comment - regarding professional consultation) is still urgent, as well as its reasoned necessity, models, functions, forms and methods, its implementation in prospective social workers' and social pedagogues' study process of professional education and provision of Professional practice. This discussion is reflected in national professional literature, chiefly, in the magazine "Sociālais darbinieks" (Higher school of social work and social pedagogy „Attistiba”, Riga, Latvia), being published from year 2001 (2004, No.2; 2005, No.3, No.4, 2006, No.2), scientific publications „Dzīves jautājumi” (Higher school of social work and social pedagogy

„Attistiba”, Riga, Latvia; ISBN 978-9984-9842-4-7; 2005; 2007) and materials of International Scientific Conference “Sabiedrība. Integrācija. Izglītība” (“Society. Integration. Education.”), being published by Personality Socialization Research Institute, Rezekne Higher Education Institution (RHEI Publishing house, 2009, ISSN 1691-5887).

## 2. Aim of the research

Professional education of prospective social pedagogues in Latvia, exactly in Latgale region – supervisions as context of consultative support implementation in study process, implementation context of positive foreign and national practice in educating of prospective professionals. Research was being performed within the framework of doctoral thesis

## 3. Insight into theoretical cognitions

The aim of the supervision is to teach, educate and manage, evaluate social workers, indirectly promoting quality level of services by his/her social workers [2], [6]. In terms of content, supervision is devised for giving possibility to professionals of social work and social pedagogues to perform their professional duties and do it co-ordinately, besides it allows workers, by intensively using their professional identity, improve the accomplishment of tasks of social work, in that way making the practical part of social work easier and increasing its standards in several fields [2], [7]. Many supervision definitions accentuate the educating aspect of supervision [3], [5], [8]. Sonia Zong stresses that regular professional development is obligatory standard for modern professional workers and that supervision could be considered as one of methods, passing on down professional knowledge, skills and values. It substantiates necessity of supervision implementation in educating process of studious social pedagogues. Western and Eastern scientists consider the competence as integrative concept, marking out different levels of acquirement and expression, however, as the basis of pedagogy's and social pedagogy's professional qualification, there are mentioned three competences: instrumental, reflexive and social competences [1], [4]. The instrumental competence shall be acquired during



study process, steadied by professional practice, but as for acquisition of reflexive and social competence, having direct connection with professional identity and competence, it is not enough to have academic studies, they are being improved by supervision or practice, assured by professional consultative support, which confirms with conventional conception of all-inclusive social work practice [1]. Investigated cognitions reveal interchanges in education, consultative support and professional background of prospective social pedagogues when beginning work in chosen profession. Supervision as method for educating of prospective social pedagogues in Latvia is still an innovative approach, being used only in one higher education institution of Latvia - Higher school of social work and social pedagogy „Attistiba”, where it has been implemented in education modules, professional practices, managing of study and qualification works. It is a good practice, being adapted from foreign countries, and it has proved its efficiency. Within the framework of Rezekne Higher Education Institution’s program “Social pedagogue”, there is offered a course “Supervision in social pedagogy”, being focused also to practical studies – individual and group sessions, in that way developing students’ understanding and necessity for supervision service in studies and professional activities (see the web page of Rezekne Higher Education Institution, Latvia). At the present moment as a part of doctoral thesis, there are being carried out researches on its implementation in provision of study process, in order to reduce gap between theory and practice

#### 4. Qualitative research

Was performed within the framework of doctoral thesis in education institutions of the city of Rezekne (Latvia), within the framework of pilot inquiry, by interviewing prospective social pedagogues, as well as in Rezekne Higher Education Institution by interviewing students and lecturers of the study program „Social pedagogue”. Aim of the inquiry - to establish necessity of supervision for prospective social pedagogues, to clarify interchanges and problems in education of prospective social pedagogues (study process, inter alia, professional practices), advisory support and professional qualification; to gather information about solutions for implementation of supervision into study process. There had been used method of triangulation for analysis of acquired information.

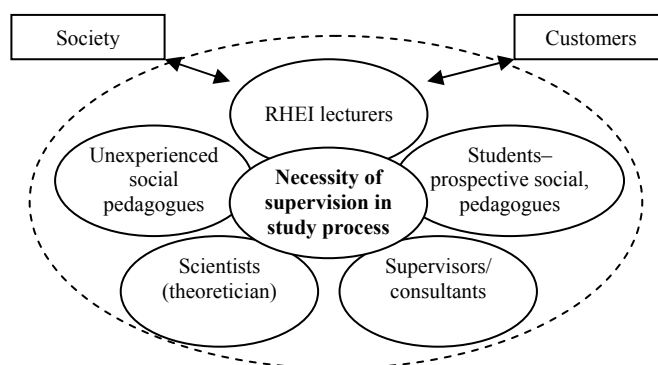


Figure 1. Research Model

There was drafted a model for performing of the research (see Figure 1). It is based on ideas of comprehensive social work practices, prescribing to take into consideration the field of practice in general and interests of all involved systems/ members/ groups. The research grounds on scientific, truth and reliability principles. There have been used also method of modelling. The research was arranged in periods. Proposed scheme gives precepts regarding research process and structure (see Table 1).

The 8 respondents, social pedagogues, were interviewed – beginners, of the Rezekne city, working in education institutions of Rezekne. The number of respondents was appointed by objective reality – in education institutions of Rezekne by the study year 2008/2009 there were working just 8 social pedagogues.

The interview enabled to establish:

- The service of supervision is accessible for employees of education institutions of Rezekne; the concept of supervision is being understood as consultation on professional issues (author’s comment – in practice of social work, being referable to social pedagogues, the supervision is not the same as consultation, despite the fact that there is some similarity);

- All respondents – social pedagogues – need help of supervisor; the majority (65% of respondents) is disaffected with services of supervision and supervisor.

- All respondents approve services of supervision that would be offered by educated (certified) specialist of supervision, having experience in social pedagogy, social work.

Conclusions:

- Demands of social pedagogues are reasoned and high enough; it is indicative of respondents’ professional qualification and comprehension about professional responsibility, tending to receive professional support in way of supervision.

- Acquired results give an insight into real situation of Rezekne city’s schools, and allow fortifying of further directions of doctoral thesis’ research.

**Table 1. Process of Qualitative Research and Structure, divided in periods**

2011 – 2012 Evaluating of the experiment, drafting of model of supervision implementation into RHEL: inquiries, modelling	4 <sup>th</sup> period: to evaluate the pilot program, to model and implement model of supervision into Rezekne Higher Education Institution for
2010 – 2011 Experiment: Practical course of supervision and professional consultation in professional practices: experiment, inquiries, analysis of essays	3 <sup>rd</sup> period: to develop a pilot program of supervision implementation into study program, being based on findings: to make an
2009 Perspective of prospective social pedagogues training: Focus Group's discussions for students, lecturers, triangulation.	2 <sup>nd</sup> period: to develop detailed outlook regarding necessity of supervision in Rezekne Higher Education Institution, by interviewing students and lectures of study program „Social
2008 Perspective of unexperienced social pedagogues: pilot inquiry - interviews	1 <sup>st</sup> period: organizing of pilot inquiry in education institutions of Rezekne city, interviewing social pedagogues – partially structure interview

## 5. Most constitutive conclusions

- The majority of students understand the importance of supervision (educating and supporting) and necessity, accenting reducing of gap between theory and practice.
- There is being accented its necessity during period of professional practice, bet there are some students, lacking knowledge in this field, and hey are being offered other models instead of supervision.
- The greatest part of respondents consider that prospective social pedagogues in studies assured by supervision (practical course, for instance: “Supervision of social pedagogue”, “Individual and group’s supervision”) is additional opportunity to apply in practice, to activate professional instruments – approaches, methods, technologies, because supervisor works with same or similar methods as professional, working in assisting profession, i.e., social pedagogy;
- The majority of all respondents notice regularity, that acquirers from the supervision will be teacher as well, gaining reflection, feedback from their students. So there will be provided mutual benefit; managers of practice institutions will be acquirers, there will develop common understanding regarding professional field of social pedagogue, professional competence and identity, that will

reduce gap between theory and practice;

- Rezekne Higher Education Institution will also be an acquirer, because study programs of social pedagogues will be supplemented by modern methods and will be developed accordingly present demands.

## 6. Conclusion

The research is still in dynamics and on foot, but the accomplished work enables to conclude that implementation of supervision or professional consultation into education of prospective social pedagogues of Rezekne Higher Education Institution is etiological, appropriate to Latvian and world’s good practice.

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# The Effect of Self-Esteem and Competency of Classroom Research Promotion Program on Professional Development Process of Teacher Trainees

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## Case Study

*The effect of self-esteem and competency of classroom research promotion program on professional development process of teacher trainees is based on 66 teacher trainees in Thailand.*

## 1. Introduction

The sample consisted of 66 teacher trainees on Thai and English major programs at Yala Rajabhat University, selected via simple random sampling. The Thai program teacher trainees were the control group and English program teacher trainees were the experimental group. Each group consisted of 33 teacher trainees. Their self-efficacy in classroom research was measured to indicate their classification block variables. Training for self-esteem and competency in classroom research was given to the experimental group. The instruments were as follows: a self-esteem and competency in classroom research promotion program; a self-esteem test; a self-efficacy in the classroom research test; and a classroom competency research test. The research was analyzed by quantitative data with a two way MANCOVA, and qualitative data with content analysis.

## 2. Research Rationale

The research rationale focuses on the following perspective: self efficacy, self-esteem and classroom research competency:

- to study the effect of interaction between self efficacy in classroom research and Self-Esteem and Competency of Classroom Research Promotion Program on Self-esteem and classroom research competency of teacher trainees, with control of classroom research knowledge prior to program application;
- to compare Self-esteem and classroom research competency between teacher trainees with high and low levels of Self-efficacy in classroom research, with control of classroom research knowledge prior to program application; and

- to compare self-esteem and classroom research competency between teacher trainees who utilized Self-Esteem and Competency of Classroom Research Promotion Program and those who did not, with control of classroom research knowledge prior to program application.

## 3. Analysis of Findings

No statistically significant joint - interaction 9 at 0.05 level - was found between self efficacy in classroom research, Self-Esteem and Competency of Classroom Research Promotion Program, self-esteem and classroom research competency of teacher trainees, with control of classroom research knowledge prior to program application.

No statistically significant difference 9 at 0.05 levels - was found in self-esteem and classroom research competency between teacher trainees with high and low levels of self-efficacy, with control of classroom research knowledge prior to program application.

The levels of self-esteem and classroom research competency between teacher trainees who utilized / did not utilize the Program 9 with control of classroom research knowledge prior to program application, showed a statistically significant difference at 0.001 levels. The levels of self-esteem in teacher trainees who utilized / did not utilize the Program 9 with control of classroom research knowledge prior to program application, showed a statistically significant difference at 0.001 level; in which the level of self-esteem in teacher trainees who utilized the Program was higher than those who did not, with the effect size of 0.121

The classroom research competency components show that the levels of classroom research knowledge in teacher trainees who utilized / did not utilize the Program showed a statistically significant increase at 0.001 level; in which the level of classroom research knowledge in teacher trainees who utilized the Program was higher than those who did not, with the effect size of 0.180

The levels of attitude toward classroom research in teacher trainees who utilized / did not utilize the Program showed a statistically significant increase at

0.001 level; in which the level of attitude toward classroom research in teacher trainees who utilized the Program was higher than those who did not, with the effect size of 0.252

The levels of classroom research skills in teacher trainees who utilized / did not utilize the Program showed a statistically significant increase at 0.001 level; in which the level of classroom research skills in teacher trainees who utilized the Program was higher than those who did not, with the effect size of 0.821.

#### **4. Conclusion**

This case study is based on ongoing research.

# Collaborative Action Research: A Means for Facilitating Professional Development among Non-Native English Language Teachers in Macao

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## Abstract

*Collaborative action research is a powerful strategy for raising the professional efficacy of teachers. This article outlines a model of professional development that links collaborative action research by teachers to their professional growth. Teaching professionals, peers and change agents work collaboratively to improve the teaching and learning environment in the classroom. It was applied to an in-service professional development program involving 35 local teachers of English in Macao (21 primary English teachers and 14 secondary English teachers). The professional development model incorporated workshops, professional forums, classroom observations and a mock classroom learning experience for the respective groups of primary and secondary teachers which lasted for the duration of 8 months. The study implies that utilization of collaborative action research is a constructive strategy for improving the effectiveness of in-service professional development programs provided that it involves sufficient reflection, professional guidance and support to accomplish the collective goals set.*

## 1. Introduction

This paper engages a dimension of action research that is referred to in the literature as critical or emancipatory; first coined by Habermas [1]. It is defined as a process that ‘aims to connect the personal and political in collaborative research through action aimed at transforming situations to overcome felt dissatisfactions, alienation and injustices of oppression and domination’ [2]. The focus of this form of research involves a group of individuals, or in this case a community of practitioners, working together to improve outcomes, self, work and the work setting. The request for an in-service professional development program was in response to the frustration many teachers felt regarding the ineffectiveness of their local Macao schools’ language programs to provide students

with opportunities that they felt the efforts of both teachers and students warranted.

Globalization has placed an increased pressure on present day language teachers working in developing regions of the world, such as Macao. Though English is not an officially recognized language of the Macao Special Administrative Region (SAR), it is a required subject in all schools registered under the Educational Authority of Macau (DSEJ) (schools are required to allot instructional time equivalent to that of mathematics) and its acquisition is a valuable indicator of academic prowess. On the one hand there is pressure on teachers from both the government and the business community to increase the number of human resources who can attract international investors and/or tourists and on the other from parents and society who want to see youth leaving school with diversified skills and abilities that will enable them to compete in an ever more complex job market. Local teachers are often blamed when the expectations of the community are not sufficiently met. While some regions, such as neighboring Hong Kong, have established policies to integrate native English speaking teachers into the school system (Hong Kong’s Education & Manpower Bureau (EMB) began its Native English Teacher Scheme (NETS) in 1998). there are mixed reviews of the overall effectiveness of the NETS and some concern that local non-native English teachers are marginalized as a result of its implementation[3]. This study explores how local English teachers may be reoriented to standards based methodologies that may enhance the language acquisition process in the classroom and allow them to collaborate on par with native English speaking teacher colleagues.

## 2. Theoretical framework

There are a number of cases combining collaborative action research and professional development which contribute to the literature [4], [5].

Overall the evidence seems to suggest that involvement in the collaborative action research process assists teachers to be open to new ideas [6]; enhances self esteem and confidence levels of practitioners [7]; assists in bringing vision to reality [8]; creates a more collegial working environment and leads to more learner centered classrooms [9].

While some have criticized the collaborative element as restrictive stating that it doesn't allow for an individualistic approach of teachers as researchers [10], the participants in this particular case study, on the contrary, appeared to have derived their strength from working as a collective team.

## 2.1. Theory of teacher change

The model of individual teacher change illustrated in Figure 1 is strongly influenced by social cognition theory [11] and reflection within the collective action research process [12]. It proposes that teacher change occurs when the tri-stage cyclical process of 1) reflection (on experience), 2) action and 3) critical reflection (on the intervention) is facilitated through

an environment of supportive input from peers and change agents, and that self efficacy beliefs mediate the influence of this process on teacher practice.

The cycle which is central to Figure 1 is based on shared (the individual teacher, peers and change agents) teaching cognitions about teaching practice especially in regard to establishing and maintaining a dynamic learning environment in the classroom. Professional forums, classroom observations and personal experiences are influenced by and influence each teacher's perception of effectiveness. First the teachers identify a common problem to address; they then consider what goals they would like to achieve relative to the elimination or lessening of the identified problem. These goals then become the standards through which individual teachers subjectively measure their own success and the means through which they encourage the success of others. Finally after collaborative discussion, individual teachers then customize a plan of action (intervention) for their own classroom community.

Participation in the collaborative process provides teachers with constructive support to eliminate

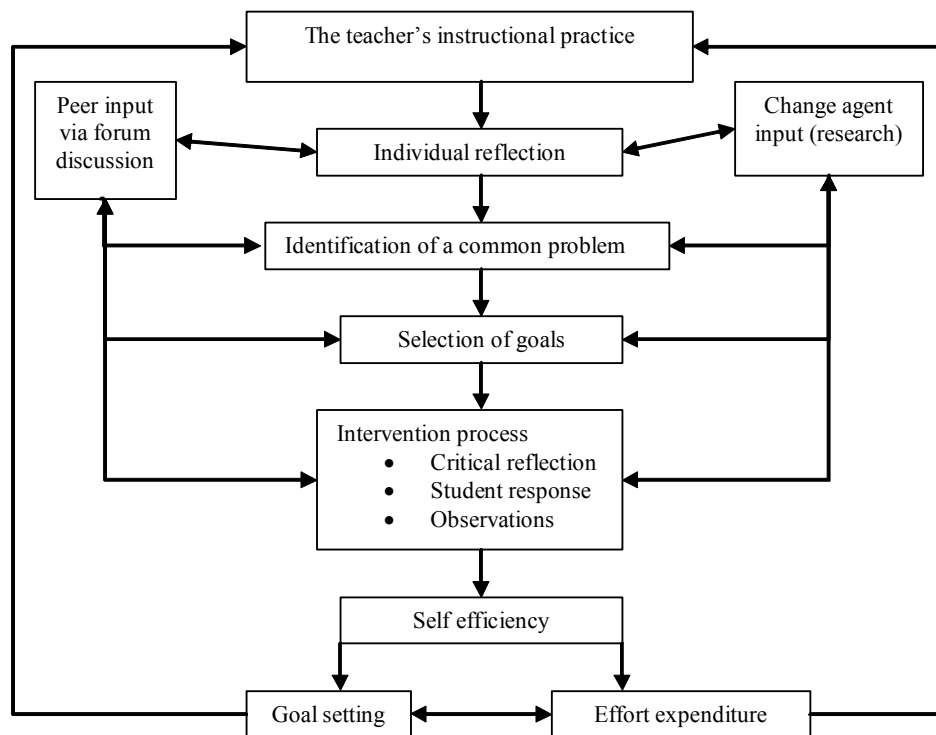


Figure 1. Model of collective action research as a mechanism for teacher change

identified obstacles to learning, ensure transparency and a concentration on common standards to evaluate the achievement of goals and focus teachers on utilizing methods and strategies of good practice to accomplish them. Collaborative action research contributes to teachers' beliefs about their ability to bring about student learning; which is a form of professional self efficacy.

Teachers, who perceive themselves to be successful, regardless of the accuracy of this judgment, expect to be successful in the future. Among the four sources of teacher efficacy determination identified by Bandura [11], the most powerful is mastery experience – which is the experience of actual success upon completion of a task. “Teachers become confident about their future performance when they believe that through their own actions they have helped children to learn” [13].

Teachers who anticipate that they will be successful are able to then set higher goals for themselves and their students; in addition they are willing to expend more effort in the process of realizing those goals. [14] Not only are teachers more motivated to experiment with new ideas but they appear more confident in overcoming any obstacles they may incur along the way. Research seems to support the idea that teachers with high expectations about their ability to teach produce higher student achievement [15].

The underpinning basis of social constructivist theories of learning, assume that learning occurs when individuals hear the thoughts and ideas of others and articulate their own emerging understandings. The theoretical model of teacher change based on the collaborative action research process falls within this broader sense of social cognition theory. It is not absolute successful implementation of the intervention that is sought (though that would be a welcome bonus) but rather each individual teacher's interpretation of the experience.

## **2.2. The influence of peers in the collective action research process**

Individual reflection, though an independent process, can be enhanced by colleagues. The model proposed incorporates input from colleagues and observation of students' reactions as well. This input works on a variety of levels; when positive there is an obvious feeling of recognition and appreciation for efforts made and this works to build confidence and confirm feelings of success. The input can also compete with the individual teacher's understanding or interpretation of the situation. The teacher would then

have to weigh the credibility of this input which would involve consideration of the source, interpretation of whether the input is isolated or substantiated by the observations and comments from others and finally whether there are any references to constructive strategies from which an action alternative could be formed.

In the collaborative process, even challenges can be addressed in a positive way as participants work together to suggest strategies and to implement them. This collaboration can successfully promote teacher efficacy [16]. The professional forum discussion was a very powerful element employed in this case study; participation in the forum gave teachers the opportunity to share success stories and suggest how they may have occurred as well it provided an opportunity to discuss problems and consider alternative strategies that may be called upon in their solution. The forum could take the form of peers communicating equally as a large group, or small group collectives with common characteristics (e.g. colleagues working in the same school or a collection of P3 teachers) and when necessary it also morphed into a mock classroom where alternative strategies could be modeled and experienced by the group.

## **2.3. The influence of external change agents in the collective action research process**

External change agents such as academic researchers or university personnel have a role to play in the process of influencing teacher change in the collective action research process. It is important however that they maintain a participant observer role within the process and guide rather than lead. An individual who is empathetic to the difficulties faced by the participants and is knowledgeable about how to face and eliminate these difficulties is a valuable asset. The influence of the external change agent is similar to that of peers, though they may occupy a different perceived level of influence based on experience and awareness of resources and strategies that are available to employ that could perhaps lead to higher overall achievement.

## **3. Applications to EFL instruction**

All the participants in this case study were local (or non-native English speaking teachers) involved in teaching English as a Foreign Language (EFL) which differs from second language teaching (L2 or ESL) in that the target language is not predominately used outside the classroom. As well the participants all

taught in Chinese medium schools where the only exposure to English that students have is contained within the English classroom.

The teachers selected 'lack of student motivation in the EFL classroom' as their common problem to address. A range of relevant literature was explored in this area of study and the teachers were presented with a comprehensive overview of second language acquisition (SLA) strategies which tended to focus on the following general themes: 1) language cognition occurs within a social context; 2) task-based learning provides students with a reality-based context for learning and practicing the language; 3) there are a variety of strategies teachers can employ to create a dynamic language learning environment; 4) The language classroom should be supportive, encouraging and challenging; 5) language students require a variety of means to practice and apply their developing communicative skills and 6) language learners should be guided to envision a purpose for acquiring the target language [17], [18], [19]. After a great deal of discussion, participating teachers then determined three goals that they would collectively work on in the process of their collective action research: 1) to create an English immersion environment in the classroom; 2) to challenge students to solve problems and complete reality-based tasks in groups; 3) to provide opportunities for public recognition of students' English achievements.

Local language teachers throughout Asia often select this career route as a result of their own successful language acquisition experience and considering the fact that teacher qualification programs in the region do not offer a specialization in language teaching *per se*, it is expected that teachers will teach as they have learned. This explains why local teachers in the field tend to use the grammar translation method of instruction (characterized as *the traditional method*), as this was the methodology employed in their learning process. Though this paper will not argue the effectiveness of one methodology over another the fact that the world is more complex as a result of globalization probably suggests that teachers should utilize a variety of strategies to assist students to become more communicative.

#### 4. Methodology

Participating teachers opened their classroom to observations by colleagues as well as change agents using an instrument that monitored patterns of communication utilized during the language class. The data recorded by the change agents over three observations (at the beginning, middle and end of the

program) were then converted into frequency and percentage charts that represent the direction, time and format of communication exchanged during the observed class period (the overall range of spoken and written communication formats fell within the following categories: Individual – IND, Individual-Questioning –IND-Q, Recitation – REC, Interactive – INT and Presentation – PRE). Based upon the collective goals we were looking for a higher concentration of IND-Q, INT, and PRE. The patterns of change from the beginning to the end of the professional development could then be plotted. In addition teachers maintained reflective professional journals which assisted change agents to raise relevant topics for the discussion forums which addressed concerns and/or showcased successes. As well as influencing the content for the model classroom (facilitated by the change agent) that gave teachers the opportunity to experience a supportive and interactive learning environment, similar to the one they were attempting to facilitate in their own classrooms. As well valuable feedback was collected from the language students themselves who completed a pre and post class motivational survey that was based on the Attitude/Motivational Test Battery (AMTB) of Gardner's [20] Socio-Educational Model of 2<sup>nd</sup> Language Acquisition and which resulted in calculation of the Class Motivational Index (CMI); a score which represents the groups' cumulative motivation to learn language. The 12-point dichotomous survey measured each student's self reported levels of instrumentality, integrativeness and anxiety all of which impact the extent to which students desire to successfully acquire the language, the degree of effort they put into learning it and the dynamics of the learning environment [21]. Once entered, the mean differences of CMI pre and post scores were then compared in SPSS using the Wilcoxon matched-pairs signed rank test. Mean differences were considered significant when the P-value was less than 0.05 which represents a 95% confidence level [22]. The Pearson coefficient (*r*), which expresses effect size was also calculated following Cohen's recommendation regarding the implication of effect size (0.01=small, 0.03=medium and 0.05=large) [23]. CMI scores can range from -21 to +21. Based on comments made by teachers in their reflective journals regarding the CMI for their respective class of students (*n* = 1158); the following seem to have implication on the dynamic teachers observed: a CMI score  $\leq 5$  indicated low motivation (students are passive, have little interaction, avoid being called upon...); a CMI score = 6 to 9 indicated average motivation (students wait to be called upon,



appear uninterested, are quiet...); a CMI score = 10 – 13 indicated above average motivation (students display interest, show positive attitudes, are active...) and a CMI score  $\geq 14$  seemed to indicate high motivation (students are enthusiastic, take initiative, are interactive...).

## 5. Results

### 5.1. Changes observed in the classroom

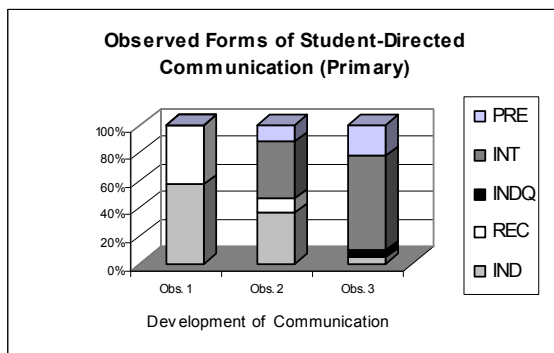
Classroom observations revealed that teacher-generated communication initially dominated the majority of allotted time in both primary and secondary classes.

**Table 1. Teacher-generated communication over one class period**

	Obs. 1 (in min.)	Obs. 2 (in min.)	Obs. 3 (in min.)
<b>Primary</b> (1 class=45") No stud.= 42	30 min. (Eng 43%)	25 min. (Eng. 65%)	18 min (Eng. 90%)
<b>Secondary</b> (1 class=50") No stud.= 49	42 min. (Eng. 36%)	23 min. (Eng. 59%)	15 min. (Eng. 86%)

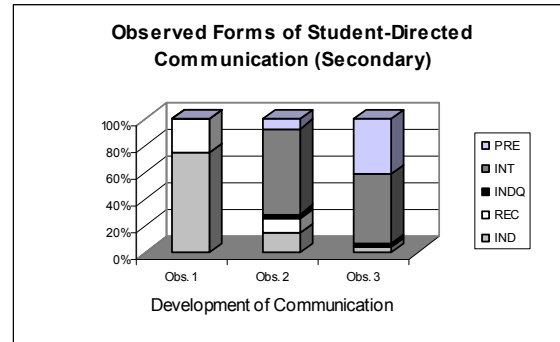
Moreover the percentage of that time utilizing English as the means of communication initially comprised a mean of only 43% for primary teachers and 36% for secondary teachers. By the third observation, teacher directed communication was considerably less while the mean percentage of English communication was considerably more (see Table 1). While it is important to look at teacher-generated communication, it is also important to consider the form of communication that students are introduced to and able to practice in the classroom. Tables 2 and 3 indicate the form of communication students were asked to utilize during the class.

**Table 2. Forms of student-directed communication (Pri)**



We are especially interested in communicative formats that require students to interact in groups (pairs, project groups or class forum) as this will give them a chance to be recognized for their developing language skills.

**Table 3. Forms of student-directed communication (Sec)**



Over time teachers moved towards the facilitation of classrooms that were more interactive, appeared more student-centered and allowed for a variety of supportive feedback for developing language learners (both written and oral from peers, the teacher and the greater school community). Teachers provided students with the opportunity to work in groups on a diverse range of tasks which allowed them to apply what they've learned in a reality-based language simulation. Presentations in which students had the role of 'educating others' on various topics became commonplace. A new focus among teachers to encourage inquiry (IND-Q); to increase interactivity through role-play, dialogue, story creation, problem solving and projects (INT) and to provide students with a supportive audience to receive, question and discuss presented opinions (PRE) appeared to be well received by the students who seemed more active in their participation.

Changes observed in students' behavior and reported by teachers in their reflective journals were supported by the CMI post test scores. Both primary and secondary CMI scores ( $n=1158$ ) were significantly higher on the post test (Pri.  $Mdn=14.6$   $z=-3.4$ ,  $p=.001$ ,  $r=-0.6$ ; Sec.  $Mdn=10.9$ ,  $z=-2.7$ ,  $p=.007$ ,  $r=-0.5$ ) than on the pre test (Pri.  $Mdn=8.3$ ; Sec.  $Mdn=7.5$ ).

### 5.2. Changes observed in the teachers' forum participation

Obvious changes were observed in the communication that defined the teacher forum. At the beginning of the program there was a concentration on problems and teachers would come with evidence of

why their interventions were not working though as time passed, teachers gained more experience and were equipped with more tools for solving problems through their sharing. Towards the end of the program, forums had become a source of inspiration and teachers overall were sharing their successes rather than focusing on difficulties. In one primary forum a teacher shared the development of a self evaluation criteria for students who participated in a group task; the teacher explained that this form worked to focus her students' in applying the target language throughout their discussion period. Other teachers then took her model and modified it for their own use. Similarly, in a secondary forum a teacher shared her experience creating an English treasure hunt activity that required her students to collect information from a cultural exhibit at one of the local museums which actually took place in the venue – after which a number of teachers developed similar “field experiences” that took students outside of the classroom. The sharing seemed to confirm previous research that suggests when teachers share a collective sense of efficacy that they can indeed accomplish goals; that outcome is plausible [24].

## 6. Conclusion

Having analyzed the data generated through this professional development training model it is clear that participating teachers perceived that their involvement in the program enabled them to make significant adjustments to their teaching practice. Despite the fact that individual growth over this time may have been varied, participants referred to the process they experienced in transformative terms.

Elements of the training the teachers voiced as beneficial were: 1) collaborating in teams and as a professional community to reach collective goals; 2) Participating in forums to share experiences and work through alternatives to problems with practitioners from other schools; 3) Receiving support from peers and change agents to maintain momentum; 4) Engaging as students in classroom situations which model successful strategies and 5) Feeling supported as a member of a professional community of educators facing similar problems in the field.

Rather than working to close a chapter in understanding how collective action research as a process can enhance the professional growth process (of even marginalized practitioners) this study opens the door to further exploration with a renewed hope that improvements are possible.

While there is no guarantee that every participant in a professional development program will be

receptive and willing to put forth the effort to make significant changes in the pedagogical practice, being cognizant that it can happen, certainly provides the stimulus to continue trying.

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## **Session 33: Cross-disciplinary Areas of Education**

The Impact of Intercultural Contact and Intergroup Approach - Avoidance Tendency on Willingness to Communicate in English among Arabic Speaking as International Students in Malaysia

(Saleh Abdalla, Salasiah Che Lah, Azimah Sazalie)

The reality of Classroom Management Skills in College of Education and College of Science in Kuwait University

(Jasem Mohammad Al-Hamdan, Ohood Nasser Al-Hajery)

Assessing Malaysian Science Students' Self Regulated Motivation and Learning Strategies

(Sadiyah Baharom, Ong Eng Teck, Mohd Ikhwan Saad, Sopia Md Yassin, Marzita Puteh, Nurul Huda Abd Rahman)

Family as a Determinant of Learners' Aggressive Behaviour in Secondary Schools

(Velisiwe Gasa, Rebotile Machaisa)

A Study to Analyze the Opinion of the Students and Supervisors Regarding Practicum in Teacher Education Programme at Post Graduate Level: Problems and Issues

(Qadir Bukhsh)

# The Impact of Intercultural Contact and Intergroup Approach: Avoidance Tendency on Willingness to Communicate in English among Arabic Speaking as International Students in Malaysia

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## Abstract

*This study was conducted to investigate the effect of intercultural contact and intergroup approach-avoidance tendency on intercultural willingness to communicate in English language in a study abroad context in Malaysia based on willingness to communicate model (WTC). The participants were 57 Arabic speaking students who are studying in Malaysian universities. Correlation and multiple regression were conducted to the data. The results of the analysis show that there were positive correlation relationships among variables. Quality of contact and intergroup approach avoidance tendency were the highest correlation with WTC,  $P \leq 0.05$  at ( $r=.328$ ,  $r=.326$ ) respectively. The multiple regressions revealed that one of the three variables (intergroup approach – avoidance tendency) had significant positive effect on willingness to communicate (WTC).*

## 1. Introduction

In today's global society, it is important for international students to express themselves, not only in writing and reading but also in speaking. However, the goal of learning a language is to facilitate communication and understanding between persons who come from different cultural backgrounds and speak different languages [15]. The interaction can be viewed as the social behavior that occurs when they communicate with each other [4].

Studies on willingness to communicate in a foreign language learning context have been carried out in a number of countries, including Japan, Korea, and Turkey. However, a few studies were conducted in second language learning. Yet little is known about how Arab students manage unfamiliar intercultural interaction and willingness to communicate in English as second language in an abroad context. Their willingness to communicate will definitely be influenced by their interaction with other students culturally different for themselves. However, Arabic speaking international students often experience social difficulties because of a lack intercultural communication competence (Olaniram, 1996 cited in [14]. Theses difficulties are further

compounded by communication predispositions and expectations of the international students as they operate with students from the host or other culture. Individuals have the orientation to approach or avoid communication [10], [11].

A major reason for not being willing to communicate is fear or lack of communication with others. Richmond and McCroskey [13] stated that lack of communication results from "an individual's level of fear or anxiety associated with either real or anticipated communication with another person or persons". Possessing a lack of communication has typically been seen in one's reluctance to speak, and is generally subsumed in the construct of communication apprehension [2]. Intercultural contact and intergroup approach-avoidance tendency in social context influences the willingness to communicate. Dornyei and Csizer emphasize intercultural contact that helps learning language through communication with others [4].

The nature of the study abroad context, the quantity and quality of interaction, intergroup tendency to make friendship enhances one's willingness to communicate. However, overseas students use the language, where target language is mastered either through direct exposure to it accompanied by frequent interaction with the target language in the host environment or in a multicultural society [6]. Byram stated that "the experience of a total environment affecting all five senses challenges learners in ways which the classroom can seldom imitate" [1]. He claims that where learners are separated from other learners and teaches, and from their family and friends, they have:" the opportunity to develop attitude which include the ability to cope with different stages of adaptation, engagement with unfamiliar conventions of behavior and interaction, and an interest in other culture".

Generally, the objective of the study is to obtain empirical evidence of the relationships among variables, quality and quantity of contact, intergroup approach-avoidance tendency, and willingness to communicate in English language communication in a study abroad context.

## 2. Theoretical approach

According to McCroskey and Richmond, WTC is correlated with introversion, communication apprehension, and self-perceived communication competence and these correlations are found in a variety of culture [12]. The two antecedents of the WTC scale are communication apprehension and self-perceived communication competence. MacIntyre [9] examined how individual difference variables, regarded as determinants of WTC, are interrelated. The personally based constructs, that originally identified by (Burgoon, 1976, cited in [9]), i.e., communication apprehension (CA), anomie, alienation, introversion, self-esteem, and perceived communication competence (PCC) were tested using a casual model ( see Figure 1).

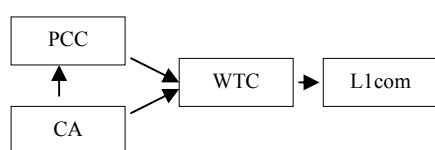


Figure 1. Willingness to Communicate Model

Results showed that WTC was most directly influenced by communication apprehension and self-perceived communication competence that was consistent with the result of McCroskey and Richmond 's study [12].

MacIntyre et al. examined the hypothesized antecedents at the trait and state level such as self-perceived competence and communication apprehension to WTC [7]. They concluded that trait willingness "may bring an individual into situation in which communication is likely "and in state willingness when communication takes place "if communication does occur, then other variables important to communication, such as anxiety or perceived competence, become more relevant to communication behavior"

MacIntyre et al. combined communication studies in L1 WTC and motivation studies in L2, and developed the conceptualized theoretical model, heuristic model, of WTC to explore individual differences in L2 communication behavior [8]. They claim that there are a number of affective variables that have potential impact on WTC. Their heuristic model is associated with the perspective that "authentic communication in a L2 can be seen as the result of a complex system of interrelated variables" [8] (see Figure 2). Although they consider their model both as theoretical and practical in explaining WTC as the result of a complex system of interrelated affective variables which influence individual differences in SLA, the model, in a practical view, can explain why some L2 students are willing to communicate in L2 even with limited L2 competence, whereas other L2 students are reluctant

to interact and communicate with members of their target L2 community. "WTC as the final step in preparing the language for communication, because it represents the probability that a learner will use the language in authentic interaction with another individual, given the opportunity"[8].

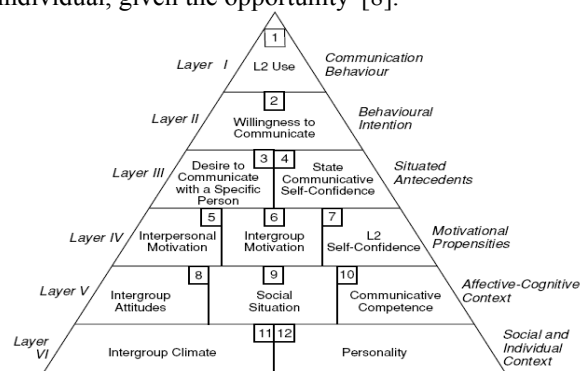


Figure 2. Heuristic Model of WTC in L2

## 3. Research Rationale

English is widely used in Malaysia and also is a medium of instruction in the universities. The aim of this study is to investigate the integration of Arabic speaking students into the environment in term of their relationships and contact with English language and speakers in or outside the universities. Moreover, this study addresses contextual variables that make a student more or less willing to communicate.

This study is conducted with the participation of Arabic – speaking students studying in universities, UKM, UPM, and UM which are located in Malaysia. They decided to study in universities of Malaysia in which there is an increasing of international movement to these universities. The opportunity to speak the English language may help the students to improve their language proficiency and use.

### 3.1. Participants

The participants of this study were 57 Arabic speaking students who are studying in Universities in Malaysia (UKM, UPM, and UM). They joined to these universities as international students. They have been taught English by Arabic teachers through the grammar-translation method in home context. Thus, they did not have much experience in speaking to native speakers or each other in English. Their contact with English language was limited in their countries. In context abroad, English language was their tool to contact with their lecturers, supervisors, ethnic and colleagues.

### 3.2. Conceptual Framework

The research framework presented in Figure 2 is proposed. The intercultural contact, which contains

of quality of contact, quantity of contact, and intergroup approach are the independent variable, and willingness to communicate as dependent variable.



**Figure 3. Conceptual Framework**

The study involves the statistical technique method of regression and correlation in SPSS software. Multiple regression is used when there is more than one independent variable influence directly dependant variable. The researcher created a model of analysis of the relationships among variables as shown in Figure 3.

### 3.3. Materials

The data for this study was collected using a questionnaire about English language contact, intergroup approach, and willingness to communicate in English. The respondents have to respond by choosing from the following options.

1. Frequency of Contact : Six items (Cronbach's alpha=.88)adapted from Clement and Noels[3] to measure the respondents' frequency of contact .The respondents have free choice to rate one from a 5-point scales : 1= Almost never frequent , 2= Sometimes frequent , 3= frequent half of the time , 4= Usually frequent ,and 5= Almost extremely frequent.
2. Quality of Contact : Six items (Cronbach's alpha=.72 )adopted from Clement and Noels [3]to measure the respondents' quality of contact .The respondents have free choice to rate one of a 5-point scales : 1= Almost never pleasant , 2= Sometimes pleasant , 3= pleasant half of the time , 4= Usually pleasant t ,and 5= Almost extremely pleasant .The last three items are reversed prior to computing the total score for the scale.
3. Intergroup approach-avoidance tendency: Seven items (Cronbach's alphas =.73) from yashima et al. [15] will use to measure students' tendency to approach or avoid non-Arab students. The respondents will choose answering of items on a 5-point scales :1= Strongly disagree , 2= Disagree , 3= Neither agree nor disagree , 4= agree ,and 5= Strongly agree.
4. Willingness to communicate:Twelve items (Cronbach's alpha =.94),adapted from McCroskey [10], will use to assess Arab students' willingness to communicate in the English communication context(public speaking, talking in meetings, group discussions, and

interpersonal communication) and types of receivers (stranger, acquaintance ,and friends). The respondents choose answering of items on a 5-point scale : 1= Almost never willing, 2= Sometimes willing , 3= willing half of the time, 4= Usually willing, and 5= Almost always willing. Instead of the percentage of time ranging from 0% to 100% in McCroskey[10].

## 4. Results

The relationships between Contact, intergroup approach and willingness to communicate were investigated through correlation analysis, First, Descriptive analysis was conducted as shown in Table 1, and then the overall correlation between variables was done. Mean and standard deviation for the questionnaire scores for all variables are shown in Table 1.

**Table 1. Descriptive Statistics**

Variables	Std.		N
	Mean	Deviation	
WTC	3.34	0.92	57
Quantity	3.26	0.59	57
quality	3.91	0.56	57
intergroup	3.18	0.41	57

The Table 2 shows Pearson correlation matrix for the variables. All correlation coefficients were significant and positive. All the tested variables intercorrelate significantly and positively with each other.

**Table 2. Pearson Correlation Matrix for variables**

Variable	1	2	3	4
Quantity of contact	1			
Quality of contact	.328(*)	1		
WTC	.265(*)	.312(*)	1	
Intergroup approach	.068	.135	.326(*)	1

Note. N=57, \* Correlation is significant at the p < 0.05 level

Correlation is one of the most common and statistical tools. The correlation coefficient describes the degree of relationship between two variables. Correlation result showed a positive significant relationship between variables as shown in Table 2 .WTC significantly correlates with all independents variables. The highest correlation was between quality of contact and intergroup approach with WTC at R=.328, R=.326 (p<0.05) respectively. Quantity was the lowest correlated with WTC at R

=.312. The result of regression analysis in Table 3 showed a significant model at Sig-F =.006.

**Table 3. Regression Analysis**

Independent variables	Std.B
Quantity of Contact	.174
Quality of Contact	.217
Intergroup approach	.285*
R2	.20
Sig-F	.006

\*P < 0.05

Intergroup approach – avoid tendency ( $\beta = .285$ ,  $p < 0.05$ ) was found to be significant whereas quantity and quality of contact were not supported. This result indicates that willingness to communicate can result from relationships with others.

## 5. Discussion

The study relates to the international communication of SL learning in the conceptual framework. It is concerned somewhat more with the human relationships in term of making friends from other countries, doing activities, and talking with foreigners in a variety of contexts.

The results show that students' relationships and intercultural contact and WTC in English language were high. Students who had higher WTC scores tended to communicate in English and contact more with others. The correlation matrix shows the significant relationships between variables and intergroup approach-avoidance tendency most strongly relates to L2 WTC, and this was also supported by regression analysis. The intergroup approach was only one variable among other two independent variables found to be significant affecting WTC directly.

However, students' WTC result in behavior that invites Arab students to interact with other ethnic groups more extensively. Those who interact with ethnic students more frequently and for greater amount of time appear to have possessed a higher degree of satisfaction in human relationships and contact, showed less difficulty in making friends, and talk with others to be better than those who did not engage in communication and relationships [14]. Individuals learn effectively and appropriately through their communication in social environments and they will be able to fulfill various needs and desires, emphasizing the acquisition of communicative competence in the language of group during interaction (Kim, 2001, cited in [15]).

## 6. Conclusion

Overall, the findings suggest that Arab students were trying to engage in activities and practice their communication behavior showing the important role that host environment plays in improvement of speaking skills.

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# **The Reality of the Classroom Management Skills in the Faculties of Education and Science in Kuwait University**

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## **Abstract**

*This study aims to identify the reality and differences of managerial, technical and communication skills, used in classroom management in the Faculties of Education and Science at Kuwait University, as seen by their students. A questionnaire was applied on a sample of (242) students. The results showed that the most important: (a) Management skills were applying discipline and making the most of lecture time; (b) Technical skills were providing the syllabus at the beginning with the objectives and content; also, assigning research tasks and homeworks; (c) Communication skills were dealing with students with respect and speaking in a clear, audible voice.*

*There were no significant differences between the sample according to their variables. The study recommended mandatory training courses for new faculty members, to update members on modern methods and suggested holding an open day at the beginning of the semester to encourage students and instructors to know each other.*

## **1. Introduction**

The university professor is an essential and important element in the educational process. The skills he enjoys play a significant role in the effectiveness of this process as they constitute one of the vital educational inputs as they affect the students from all aspects cognitively, psychological, behaviorally and emotionally. No matter how efficient the other elements of the educational process are, their effectiveness is limited unless there is a competent university professor who is well-prepared, both educationally and professionally, in addition to having creative capacities that enable him to adapt to educational innovations, carry self-development and constantly update his information.

The successful professor is the one who is able to perform his role with efficiency and

competence while dedicating his efforts to create suitable educational opportunities for his students through activities, within and outside the classroom.

Classroom management is both personal creativity and systematic procedures. It depends on the university professor's personality and his style in dealing with learners inside and outside the classroom; it depends on laws and procedures proven by various studies [11].

Moreover, classroom management is an important factor of successful teaching in general and universities in particular since classroom management requires high organizational capacities and good coordination skills in the implementation, as represented by the university professor's management, technical and communication skills in managing classrooms.

The management of the classroom as a set of behavioral patterns used by the professor in order to provide appropriate educational environment and to preserve its continuity in order to realize the desired educational goals [9].

## **2. Research Rationale**

It is to be expected that the learning environment of lecture halls differ according to the study courses (scientific) or (arts), and that every classroom has a climate or a unique characteristic which distinguishes it from other rooms and affect the effectiveness of learning within the classroom.

Since the focus of classroom management is the student, by guiding his mental, physical and spiritual development, it is therefore necessary for the university professor to acquire some appropriate skills to manage the classroom. Hence, the research problem arises because some university professors may need some of the most important skills in managing their classrooms and dealing with students. The aim is to correct imbalances in the educational process for students and improve their level.

Table 1. **Repetitions**, Percentages, **Median**, **Standard Deviation** for Management Skills from study sample's viewpoint

No	Parameter Statement	disagree		Do not know		agree		M	SD
		Rep.	%	Rep.	%	Rep.	%		
1	Coming to the lecture on time.	29	12	7	2,9	206	85,1	2,73	0,66
2	Ending the lecture on time.	48	19,8	19	7,9	175	72,3	2,52	0,81
3	Applying discipline in classroom.	16	6,6	21	8,7	205	84,7	2,78	0,55
4	Being firm against unwanted student behaviour within classroom	44	18,2	35	14,5	163	67,4	2,49	0,79
5	Making the most of lecture time.	39	16,1	21	8,7	182	75,2	2,59	0,75
6	Fairness in giving grades	96	39,7	62	25,6	84	34,7	1,95	0,86
7	Encouraging students to read and look up outside sources	65	26,9	45	18,6	132	54,5	2,28	0,86
8	Encouraging group work	53	21,9	37	15,3	152	62,8	2,41	0,83
9	Attempting to solve students' problems	98	40,5	60	24,8	84	34,7	1,94	0,87
10	Differentiating between female/male students in treatment.	86	35,5	62	25,6	94	38,8	2,03	0,86
11	Taking into account students' (social, health, scholastic...) conditions	89	36,8	48	19,8	105	43,4	2,07	0,90

Table 2. **Repetitions**, Percentages, **Median**, **Standard Deviation** for Technical Skills from study sample's viewpoint

No	Parameter Statement	disagree		Do not know		agree		M	SD
		Rep.	%	Rep.	%	Rep.	%		
1	Providing the syllabus at the beginning of the semester.	6	2,5	6	2,5	230	95	2,93	0,35
2	Explaining course objectives and content at the beginning of the semester.	10	4,1	17	7	215	88,8	2,85	0,46
3	Advising and guiding students scholastically	58	24	51	21,1	133	55	2,31	0,83
4	Taking individual differences into account.	101	41,7	63	26	78	32,2	1,90	0,86
5	Presenting the course in an interesting, exciting way	105	43,4	36	14,9	101	41,7	1,98	0,92
6	Responding to students' wrong answers using 'educational' methods	79	32,6	58	24	105	43,4	2,11	0,87
7	Using teaching methods that encourage learning	88	36,4	58	24	96	39,7	2,03	0,87
8	Using examples in presenting lessons	28	11,6	25	10,3	189	78,1	2,67	0,68
9	Using technological methods in teaching.	59	24,4	26	10,7	157	64,9	2,40	0,86
10	Setting exam questions from the assigned material	67	27,7	44	18,2	131	54,1	2,26	0,87
11	Assigning research tasks and homeworks	25	10,3	18	7,4	199	82,2	2,72	0,64
12	Discussing final results with students in the classroom	108	44,6	44	18,2	90	37,2	1,93	0,90

Table 3. **R**epetitions, **P**ercentages, **M**edian, **S**tandard **D**eviation for Communication Skills from study sample's viewpoint

No	Parameter Statement	disagree		Do not know		agree		M	SD
		Rep.	%	Rep.	%	Rep.	%		
1	Including as many students as possible in class discussions	69	28,5	46	19	127	52,5	2,24	0,87
2	Motivating students	80	33,1	56	23,1	106	43,8	2,11	0,87
3	Dealing with students with respect	19	7,9	38	15,7	185	76,4	2,69	0,61
4	Behaving in a superior manner to students	82	33,9	74	30,6	86	35,5	2,02	0,84
5	Accepting students' views and ideas	48	19,8	48	19,8	146	60,3	2,40	0,80
6	Forcing their opinions on students without any discussion	66	27,3	50	20,7	126	52,1	2,25	0,86
7	Understanding students' emotions and feelings	88	36,3	67	27,7	87	36	2	0,85
8	speaking in a clear, audible voice.	27	11,2	23	9,5	192	79,3	2,68	0,67

It was seen that some students offered a glimpse in some articles of the suffering they endure in the classroom and its effects [4].

Some professors from the Faculties of Education and Science unwillingly accept to be asked by the student or to be discussed. In addition, a number of professors explain material in a manner much higher than their students' understanding, while others confuse students by tackling more than one topic a day, citing the short semester as an excuse. Still, some teachers do not understand the circumstances of students while others lack respect in dealing with students. Moreover, some professors at the college differentiate in their treatment of male and female students. Others do not tolerate students' problems. On the other hand, a number of instructors lack the ability to deliver information. Students are being pressured by setting exam dates close to each other. Some exam questions are set outside the curriculum leading students to frustration. Students cannot review their final grades because professors avoid meeting them for this purpose. Teachers must offer every piece of information and attract students to the lecture, education, and to give them freedom of thought. Finally, they must apply the principle of humility and compassion with the learner and the best of the example is the Prophet Mohammed peace be upon him for he was modest with his Companions. Hence, the researchers found that it was feasible to conduct a study to identify the reality of some classroom management skills practiced by the university professor from the viewpoint of the students in the Faculties of Education and Science.

This study tries to answer the following questions:

- What are the current management, technical and communication skills practiced in classroom management by Faculties of Education and Science professors?
- Are there statistically significant differences among management, technical or communication skills practiced in classroom management by Faculties of Education and Science professors, according to college, gender or overall average?
- What are the recommendations that might help improve classroom management skills for Faculties of Education and Science professors?

### 3. Conclusion

The results showed that the most important:

- Management skills were applying discipline and making the most of lecture time.
- Technical skills were providing the syllabus at the beginning with the objectives and content; also, assigning research tasks and homeworks.
- Communication skills were dealing with students with respect and speaking in a clear, audible voice.
- There were no significant differences between the sample according to their variables.

The study recommended mandatory training courses for new faculty members, to update members on modern methods and suggested holding an open day at the beginning of the semester to encourage students and instructors to know each other.

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# Assessing Malaysian Science Students' Self Regulated Motivation and Learning Strategies

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## Abstract

*This research looks into the self-regulation of motivation and learning strategies of secondary science students of different age group, gender, race, type of school and social economic background in Malaysia. The self-regulation of learning strategies consists of rehearsal, elaboration, organization, critical thinking and metacognitive self-regulation. The sub-scales for the self-regulation of motivation consists of the intrinsic and extrinsic goal orientation, task value, control of learning belief, self-efficacy and help seeking. There were mixed results from this study with some dimensions having significant differences while others did not. The mixed results could be due to the diverse background of the Malaysian students and revealed interesting aspects of their self-regulatory strategies.*

## 1. Introduction

Self-regulated learning is a way of approaching the academic tasks, which can be learned regardless of age, gender, ethnic background, actual ability level, prior knowledge, or motivation. Apart from that, it gives the students the opportunity to control their behaviour, motivation and affect, and cognition in order to improve their academic learning and performance. This implies that all students can learn to become self-regulated learners and that faculty can explicitly help them achieve their academic goals.

## 2. Literature Review

According to Zimmerman, all learners try to self-regulate their academic learning and performance in some way but there are dramatic differences in methods and self-beliefs among students [1]. Other evidence suggest that some learners maybe less inclined or able to self-regulate than others [2]. Self-regulation is not merely a mental ability or an academic performance skill; rather it is self-directive process by which learners transform their mental abilities into academic skills. Learning is

viewed as an activity that students do for themselves in a proactive way rather than as a covert event that happens to them in reaction to teaching. Zimmerman, emphasized that students' self-regulation orientates self-generated thoughts, feelings, and behaviors in attaining their goals [3].

## 3. Research Rationale

The theoretical basis of this study is from the cognitive constructivist approach, which has its roots in the Gestalt theories of perception, cognitive psychology, theories of development and the works of Vygotsky. The cognitive constructivist views learners as individuals who play an active role during their learning and recall. They view students as scientists who construct theories that regulate their own learning. Paris and Byrnes suggested that children have a general theory of self-regulation, which is comprised of four component theories: self-competence, effort, academic tasks and instrumental strategies [4]. The later describes the deliberate mental and physical actions taken by the learner to process information. A study revealed that students of high scientific reasoning abilities adopted the meta-cognitive learning strategies than low scientific reasoners [5].

## 4. Methodology

A total of 616 16-year-old students from five rural and six urban schools participated in this research. A modified version of the MSLQ Questionnaire in the Malay language was use to explore their self-regulated learning strategies [6]. This instrument had two major scales; motivation (with 6 sub-scales) and learning strategies (with 10 sub-scales) and had an alpha Cronbach reliability value of 0.894 and 0.927 respectively. This instrument measured responses on a seven Likert scale.

## 5. Analysis of Findings

Quantitative analysis by the one way ANOVA revealed these results:

- There is a significant difference ( $p=0.01 < 0.05$ ) in learning strategies between rural and urban science students but not in their motivation.
- There is a significant difference in the motivation between girls and boys but not in their learning strategies
- There are significant differences between students of different ethnicity in all dimensions measured
- There is a significant difference in SRL strategies between students from the high and low income groups.

## 6. Conclusion

Significant differences in the learning strategies between rural and urban schools could well be due to the facilities available in the urban areas as compared to the rural areas. Students in urban schools may have an easier access to resources and technology support such as computers and the Internet. Nevertheless, both groups are as motivated in their learning. Results showing a higher score for motivation and learning strategies for girls showed the extent to which girls are willing to self-regulate when faced with a difficult subject like science. Differences in all dimensions studied with regards to ethnicity and socioeconomic background suggests the role of beliefs, culture and standards of living that might influence students' self-regulation of their learning and motivation. These aspects are worthy of future research.

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# Family as a Determinant of Learners' Aggressive Behaviour in Secondary Schools

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## Abstract

*This paper focuses on the extent in which family contribute towards aggressive behaviour exhibited by secondary school learners. Family factors were considered when investigating the problem of aggressive behaviour. An extensive literature review showed that the family factors contribute to aggressive behaviour among adolescents. In order to support or reject the findings of the literature study, quantitative (questionnaire) research was conducted. The results of the quantitative research concerning the contribution of family climate towards learners' aggressive behaviour in secondary schools were analysed and interpreted. The empirical research indicated that the more negative the family climate of the adolescent is the more aggressive the adolescent is, and vice versa.*

## 1. Introduction

Aggressive behaviour that learners exhibit in secondary schools is a concern for everyone. Most learners are involved directly or indirectly in this situation. This experience does not only affect learners but also education personnel, teachers, parents, school governing bodies and the community at large. This behaviour frequently interrupts the smooth running of the school and leads to climate not conducive to learning and teaching. It is reported by different kinds of media – radio, television and newspapers that hostility and aggression are perhaps the most common forms of interaction between people in society. Reports of assault, random aggression, gun fights, violent threats and other forms of attacks are continually in the headlines.

Through the media, one learns of an adolescent who commits some horrifically violent act. Another adolescent, for no apparent reasons or critical incident, seemingly erupts and seriously injures or kills someone. The well publicised South African event of this nature was reported on News 24 [17], whereby a Grade 12 boy at the Nic Diederichs

Technical High School, Morne Harmse, allegedly stabbed and killed fellow pupil Jacques Pretorius, 16, with a sword in the school premises. He also allegedly injured another boy and two gardeners. Teachers who are confronted by angry, defiant teenagers wonder about contributing factors. Homes are no longer isolated from the effect of hostility and aggression. Very often family life is disrupted by an angry and difficult child. Much is said about the effect of the family upon the adolescent, but the impact of poor relationships is reciprocal. Communities, schools, neighbourhood and cities are severely affected by this aggression.

It appears that learners' aggressive behaviour stems from family climate. If the learner is unstable due to family climate, he/she may suddenly display deviant behaviour, tends to be emotionally disturbed and exhibits destructive tendencies. The frequent exposure to aggressive people may involve any individual in aggressive episodes, and the presence of aggressive models increases the likelihood of imitation. Aspects of personality, such as impulsiveness, hostility and fearfulness, may act as moderators of aggressive behaviour [5]. The highest rates of aggressive behaviour are found in environments where aggressive models abound and where aggressiveness is regarded as a highly valued attribute [13].

## 2. Related Work

There is, in nearly all accounts of dysfunctional families, an overriding emphasis on the difficulties and problems its members' experience. The experience of living in a home that is unstable, for whatever reason, is unbearable and leaves its members with emotional scars. These emotional scars take time and are not easily healed. They pervade the present and threaten the future expectations of the victims. Unresolved problems or inhibited emotions do not automatically disappear but accumulate and often find destructive channels.



These channels continue haunting, disturbing and shattering the hopes of the individual. The one involved becomes vulnerable and heightened emotions lead to aggressive behaviour.

Some homes may appear intact but have a pervasive oppositional style. These homes may be characterised as being dysfunctional and cause its members to be aggressive. The members adopt an aggressive style of behaviour as a form of seeking help or attention and in order to cope in that uncondusive climate. This was confirmed by Heavens [11] who states, *Conflict, high discord and poor and uncooperative communication between parents are more likely to result in poor adjustment by the adolescent*. If the adolescents are frustrated because of witnessing conflict between their parents, they may resort to aggressive behaviour. Witnessing violence between parents is an important factor that causes aggressive behaviour. Observation of others (parents) who engage in aggressive behaviour causes emotional arousal in the observers (adolescents), which may increase the likelihood of imitative aggression or may heighten the intensity of aggressive responses.

Family is regarded as an important support system available to the child and adolescent. Consequently, any disturbance of this support system through factors such as parental separation or divorce, domestic violence, abusive parents, negative parenting style, substance dependency and socio-economic status of the parents, have implications for adolescent functioning [18]. Divorce and separation have been identified as causing stress for the whole family. Learners who are part of this situation feel frustrated and often display behavioural problems. These behavioural problems can be seen through anger, disruptive behaviour and aggression [15]. Parents who are going through a process of divorce and separation also become frustrated and start to retaliate. They sometimes abuse their children physically or emotionally and sometimes resort to alcohol. In some cases parental hostility becomes so extreme or gets out of control and serious abuse of the learners occurs [16]. Learners who are exposed to this kind of home life are sometimes traumatized and start to show deviant behaviour, delinquency and maladjustment. They also resort to aggression as a form of attention seeking.

### **3. Research Methodology**

The draft instrument was developed and it was decided that the draft instrument would take the form of a self-report instrument. The motivation for using

a self-report measure was because it allows anonymity. More candid responses can be obtained when using a self-report measure as opposed to a personal interview [1]. This type of questionnaire was also regarded as the most appropriate for scoring purposes. The questionnaire implemented a Likert-type response scale. Respondents had to respond with a: 'No', 'Undecided' or 'Yes'. It was decided that the self-report instrument be formatted into a series of short statements. To prevent misinterpretation of questions, some guidelines when formulating items by Babbie were considered [2]. Another motive was that a questionnaire is reliable to the extent that independent administrations of it or a comparable instrument consistently yields similar results under comparable conditions. The statistical programme which was used to analyze the results of this research is the Cronbach Alpha Reliability Coefficient. This is a split-halves method. The Cronbach Alpha Reliability Coefficient is 0.743, which is good for this kind of questionnaire.

Seven secondary schools in Thabo Mofutsanyane District, Bethlehem Town in the Free State Province, South Africa were selected. These schools were selected because they were deemed to represent learners from all backgrounds and different environmental upbringing who have been directly and indirectly involved in aggressive behaviour. Some of these learners were directly involved because they were among the gangsters who were involved in aggressive episodes and perpetrating violence. Others were indirectly involved because they were witnessing this aggressive behaviour in their schools and among their friends. The researcher was also based in this area and had access to these schools. Thus this was a convenient sampling method.

#### **3.1. Results**

The raw data was computerized and analyzed by an expert. The interpretations were done through the help of the following findings that focus on the listed specific problem statements and their corresponding hypotheses.

#### **3.2. Biographical data of the respondents**

Descriptive statistics (focusing on questions 1 to 10) yielded the following biographical data for the sample.

**Table 1. Biographical data of the respondents**

	Factor	Frequency	Percentage
Age	14 years and less	13	6.6
	15 to 18 years	164	21
	19 years and older	82.8	10.6
Home language	Sotho	160	80.8
	Zulu	16	8.1
	English	1	.5
	Other	21	10.6
Parents' marital status	Married	120	60.6
	Never married	35	17.7
	Divorced	15	7.6
	Other	28	14.1
Father's work	Unemployed	45	22.7
	Self-employed	52	26.3
	Gardener/Cleaner/ Labourer	35	17.7
	Professional employee	13	6.6
	Other	53	26.8
	Mother's work	Unemployed	76
Self-employed	33	16.7	
Gardener/Cleaner/ Labourer	62	31.3	
Professional employee	8	4.0	
Other	19	9.6	
Father's education	None	35	17.7
	Grade 1-7	62	31.3
	Grade 8-12	75	37.9
Mother's education	Diploma/Degree	26	13.1
	None	29	14.6
	Grade 1-7	64	32.3
	Grade 8-12	81	40.9
	Diploma/Degree	24	12.1
The type of house you live in	Big house	55	27.8
	Small house	107	54.0
	Shack	27	13.6
	Other	9	4.5
The type of people you live with at home	Loving	188	94.9
	Aggressive/Violent	7	3.5
	Uninvolved	3	1.5
Type of discipline at home	Unreasonably strict	19	9.6
	Strict but reasonable	174	87.9
	No discipline	5	2.5

The Table 1 reflects that most of the respondents do not know the whereabouts of their fathers because when they were asked about their fathers' work a large number of them (26.8%) responded (other), followed by self-employed (26.3%) and then unemployed (22.7%). The (other) might hold a meaning that the respondents were never exposed to or never knew their fathers or it may be that the father is deceased. This concurs with the commonly held view that the absence of paternal authority and the paternal role model leads to a higher rate of aggression and violence.

More than half (54%) of the respondents live in small houses whereas (27.8%) live in large houses and a small percentage (13.6%) live in shacks and a very small number (4.5%) cannot identify themselves as living in one of the above options. The above percentages are important for aggression and

Fraczek and Zumkley [8] supported this when saying: *the socio-economic conditions of the family are related to child aggression.*

A significant majority (94.9%) of the type of people these respondents live with at home are loving. However, there was a small number of those who are aggressive (3.5%) followed by those who are uninvolved (1.5%). At home 87.9% of the respondents are exposed to a strict but reasonable discipline whereas 9.6% are exposed to unreasonably strict discipline and a small percentage (2.5%) is not being disciplined at home. The percentages shown above are important for aggression because they prove that some of the people the respondents live with at home are uninvolved in the respondents' lives, unreasonably strict, do not give a fair discipline and are also aggressive.

**Table 2. Frequencies and percentages for family climate**

Item	% No	% Undecided	% Yes
My parents are supportive	7.6	5.6	86.9
There are interesting things to do at home	16.7	7.1	76.3
My parents often fight with each other	75.8	7.6	16.7
My parents stop me from doing bad things	2.5	2.0	95.5
My father is a good example to me	20.7	14.1	65.2
My parents get worried when I unexpectedly come home late	12.1	3.0	84.8
My parents get upset when I fail at school	8.1	1.5	90.4
My parents are indifferent to my feelings	63.1	2.5	34.3
My parents scold me for no apparent reason	79.3	2.5	18.2
My mother is a good example to me	10.1	5.1	84.8
My home is boring	69.7	1.5	28.8
My parents discourage any form of aggression	15.2	3.5	81.3
My father spends little time with me	50.0	19.7	30.3
My parents teach me right from wrong	6.6	2.0	91.4
My father drinks excessively	57.1	17.7	25.3
My poor background stops me from achieving success	84.3	2.0	13.6
My parents allow me to do whatever I want	85.4	3.0	11.6
My mother drinks excessively	82.8	7.1	10.1
My parents punish me whenever I misbehave	14.1	2.5	83.3
My parents encourage me to fight with other children	96.0	.5	3.5

The Table 2 shows that the family climate of most of the respondents is positive and conducive because most of them (86.9%) indicated that their parents are supportive. This is also confirmed by 81.3% of the respondents who indicated that their parents discourage any form of aggression. However, the following is important for aggression in learners: 16.7% of the respondents witness fighting between

their parents and also find home as not interesting at all, 20.7% confirm that their fathers are not a good example to them, 34.3% find their parents indifferent to their feelings, 18.2% are scolded for no apparent reason, 15.2% are being encouraged by their parents to be aggressive, whereas 30.3% feel that their fathers neglect them as they spend little time with them and 25.3% confirm that their fathers drink

excessively. The above percentages prove that family climate is responsible for aggressive behaviour expressed by the adolescents. Lauer confirms, *Broken homes and homes in which parents*

*frequently quarrel have been linked to stress in adolescents and stress often results in physical and emotional illness [14].*

**Table 3. Frequencies and percentages for aggression instinct**

Item	%: No	% Undecided	% Yes
Fighting is good when you are cross with someone	74.2	3.0	22.7
Fighting is bad	11.1	1.0	87.9
When I am really upset I become aggressive	76.3	1.5	22.2
Belonging to a gang that can fight together is cool	88.4	1.5	10.1

Most of the respondents (87.9%) feel very negative about fighting as compared to only 11.1% of those who feel positive. They also feel very negative about belonging to a gang that can fight together as it is shown by 88.4%. However, 22.7% respondents feel that fighting is good when someone

is cross and 22.2% confirm that they become aggressive when they are really upset. This is confirmed by Moeller who maintains that adolescents who are aggressive believe that aggression will yield tangible payoffs and terminate others' noxious behaviour.

**Table 4. Mean aggression instincts of learners who live with different types of people at home**

Type	N	Mean	Std. deviation	df	f	Significance
Loving	188	1.3271	.44410			
Violent	7	1.7143	.56695	2	4.267	.015
Uninvolved	3	1.8333	.57735			

According to Table 4, the null-hypothesis may be rejected on the 5% level (p is 0.15 which is smaller than 0.05). This means that the aggression instinct of learners differs significantly depending on the types of people who live with them at home. The means indicate that the learners' aggression instinct is significantly lower (1.3271) if the people at home are loving than if they are violent (1.7143) or uninvolved (1.8333).

Berkowitz [4] states that if children are exposed to aggression, they tend to become aggressively inclined themselves '*violence breeds violence*'. Baron and Richardson concur that children who witness physical violence between people at home are likely to use similar actions in their interactions with others [3]. The above researchers also confirm that violent upbringing teaches approval of violence as well as 'how to hit, what to hit with, and what the impact should be'.

#### 4. Discussion and Conclusion

The Tables 1 to 4 were drawn in order to show the results from testing the null-hypothesis. Most depicted that one way or another aggression is present in adolescents' surroundings. The Table 2 shows that family climate exposes adolescents towards aggressive behaviour.

The Table 3 reveals that most adolescents do not like to fight and do not like being involved with a violent gang. However, a small number of adolescents believe that fighting is good. The Table 4 reveals that adolescents who are exposed to a positive family climate have less aggressive instincts. This means the more negative the family climate is, the more aggressive the learners are.

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# **A Study to Analyze the Opinion of the Students and Supervisors Regarding Practicum in Teacher Education Programme at Post Graduate Level: Problems and Issues**

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## **Abstract**

*Teaching Practice is the practical aspect of teacher training. Almost every teacher training institution has teaching practice as a compulsory portion of the syllabus. In some institutions there are two types of the teaching practices i.e. internal and external and some have only external teaching practice. Teaching practice is the interaction of the teacher directly to the students. It is the test of the teaching skills and is the feed back for the communication skill and style for new teacher. The present study delimited to B.Ed programme of The Islamia University of Bahawalpur, session 2007-2008. The present study was undertaken to highlight the problems and issues and weakness of teaching practice. To achieve the desired end, survey research was considered appropriate. 135 students of B.Ed morning/evening divided in nine different secondary boys/girls schools having 27 supervisors, 9 Teachers from Department of Education, 9 Teachers from schools and 9 heads of the schools were taken as sample. Two questionnaires were used as data collection tool, one for students and one for supervisors. Data was analyzed in term of percentage and mean score. The major results of the study were as: (a) there is gap in the lesson planning and time duration for presentation of lesson (b) Schools provides sufficient facilities for teaching practice (c) Duration of the teaching practice is not sufficient (d) Teaching practice may be divided in two equally in two semesters (e) External Teaching Practice is more beneficial for the professional development.*

## **1. Introduction**

The quality of education is directly related to the classroom instruction as indicated by National Educational Policy 1998-2010 [2]: “the quality of education is directly related to the quality of instruction in the classrooms. The teacher is considered the most critical factor in implementing all educational reforms at the grassroots level. It is fact that the academic qualifications, knowledge of the subject matter, competence and skills of teaching

and the commitment of the teacher have effective impact on the teaching- learning process.”

A process and a series of activities which aim at enabling an individual to assimilate and develop knowledge, skills and understanding that are simply related to a narrow field of activity but allow a broad range of problems to be defined, analyzed and solved by Buckley and Caple [1]. Teaching is the process by which we try to impart knowledge to some one through activities and experience by Robinson [6]. Teaching is the reflective, thinking activity. Teaching is the practice of skill of communication and needs practice as indicated by Stones [7]: “For a skill to be useful it is necessary for it to become part of one’s routine activity. For this to happen it is necessary for the learner to practice the skill, that is, to engage in activity involving the deployment of newly acquired skill. Repeated practice also develops a more integrated and smoother performance”. The teaching skill can be improved by the practice and this fact is indicated by Petly [5]: “We learn specific skills and abilities by correct practice .The students must use-that is, practice –the skill.” Teaching is the activity that needs practice, repetition to improve the skill of teaching.

There is imbalance in the different components of the teacher training programme as discussed by National Educational Policy 1998-2010 [2]: “The teacher training programmes have an imbalance among the courses pertaining to the academic knowledge of the subject, content of the school curriculum, teaching methods, teaching practices and curricular activities. This is because of short duration of most of the existing teacher education programme.”

## **2. Problems and Issues of Teaching Practice**

Teaching practice is a practical work by the student-teacher in the real setting in schools. Number of the terms is being used for the teaching practice as indicated by Perry [4]: “Teaching practice refers to the period of time in which you, as a student-teacher, gain first-hand experience in working with a particular group of children. A number of the terms such as ‘the practicum, student teaching, field

studies, infield experience or intern ship are used to refer to this period". Teaching practice has been part of the teacher education programmes around the world as discussed by Iqbal [3]: "Teaching practice has been part of the teacher education programme in the various countries around the world. We may disagree with the duration of teaching practice or the manner in which it is conducted, but none of us can deny its importance." In teaching practice there may be several problems that affect the process of teaching learning. The list of such problems is given as:

### **2.1.Format of the Lesson Plan**

The format of the lesson plan is one of the important issues in teaching practice. Certain format follows the certain methodologies and the methodologies are selected according to the content. It means there is certain relationship in content, method and format of the lesson plan.

### **2.2.Duration of Period**

Duration of period is also important for the selection of method and formation of lesson plan. Conventional teaching method requires shorter periods as compared to the modern and activity based learning.

### **2.3.Supervision of Teaching Practice**

Supervision of teaching practice is a critical issue. Number of the activities to be observed, time for each activity, participation of school in supervision.

### **2.4.School Facilities For Teaching Practice**

The quality of teaching practice is also affected by the facilities provided by the school. So facilities provided by the school are important issue.

### **2.5. Co-Operation and Assistance by School**

Co-operation of school is critical issue. Teaching practice is not possible without the co-operation of the school. Facilitating the student-teacher, facilitating the supervisors and provision of help in achieving desire end is possible with the cooperation of school. All such activities carried out with the co-operation of the school.

### **2.6.Internal and External Teaching Practice**

Internal and external teaching practice is also a matter of concern for quality of teacher education

and teacher training. Some institutions have external teaching practice and some of the institutions have both internal and external teaching practices. In internal teaching practice, students are trained with in the institutions while in external teaching practice; students are trained in real situation in schools. The faculty of the institution and the teachers of the school both supervise and guide for the effective learning of practical skill in real situation.

## **3. Objectives of the Study**

This study was based on the following objectives:

- To identify the problems of teaching practice at post graduate level;
- To analyze the problems and issues of teaching practice at post graduate level;
- To suggest solutions to the problems faced during teaching practice at postgraduate level.

## **4. Research Methodology**

### **4.1.Population and Sampling**

The population of the study consisted on 135 students of M.A (Education) morning/evening having 27 supervisors (9 teachers from school, 9 heads of schools and 9 teachers from the Department of Education, The Islamia University of Bahawalpur.100% population was taken as sample.

### **4.2.Development of Research Tool and Data Analysis**

Since the study was descriptive in nature, therefore, survey approach was considered appropriate to collect the data. For this purpose two questionnaires on the five points (likert) scale were developed with one open ended questionnaire at the end of questionnaire for supervisors. The questionnaires were validated through pilot testing 15 students-teachers and 06 supervisors.

### **4.3.Administration of Research Tool**

The finalized questionnaires were administrated on students-teachers and supervisors. The response was 100%.

## **5. Data Analysis**

The data collected through questionnaires were coded and analyzed through Ms-Excel in term of percentage and mean scores. Scale values assigned to each of the five responses was as:

## Level of Agreement

	Scale Value
SA	5
A	4
UNC	3
DA	2
SDA	1

To calculate the mean score, following formula was used.

$$\text{Mean} = \frac{\text{FSA} \times 5 + \text{FA} \times 4 + \text{FUNC} \times 3 + \text{FDA} \times 2 + \text{FSDA} \times 1}{N} \quad \text{Score} =$$

Where

FSA= Frequency of strongly agreed

FA= Frequency of agreed

FUNC= Frequency of uncertain

FDA= Frequency of disagreed

FSDA= Frequency of strongly disagreed

The findings from data analysis are presented below:

## 6. Analysis of Findings

### 6.1. Questionnaire for the Students

- Opinion of the students about lesson plan:** Majority of the respondents (84%) agreed with the statement that they plan lesson before class. The mean score 4.2 supported the statement. A majority of the respondents (58% with mean score 3.4) agreed with the statement that they design activities in lesson. A significant majority (72%) with mean score 3.3) of the respondents expressed their opinion that lesson did not completed in a period. A significant majority (92%) of the respondents agreed with the statement that lesson plan follow logical order. The mean score is 4.2, which supported the statement. A significant majority (86% with mean score 2.0) were of the opinion that they are not satisfied with the number of the lessons in teaching practice.
- Opinion of the students about teaching Practice:** Majority of the respondents (93%) agreed with the statement that they participated in internal and external teaching practice. The mean score 4.2 supported the statement. A slight majority of the respondents (56% with mean score 2.7) agreed with the statement that they learned in internal teaching practice. A significant majority (74%) with mean score 3.7) of the respondents expressed their opinion that external teaching practice is more beneficial for professional development. A slight majority (51% with mean score 2.6) of the respondents

teaching practice is not the training of school responsibilities. A significant majority (73% with mean score 2.3) were of the opinion that teaching practice is not the training of co-curricular activities. A significant majority (87%) agreed with the statement that teaching practice enhance the professional skill. The mean score is 3.9 which supported the statement.

- Opinion of the students about duration of Teaching Practice and final lesson:** Majority of the respondents (74% with mean 2.2) disagreed with the statement that the duration of the teaching practice is sufficient. 50% respondents with mean score 2.9 disagreed with the statement that teaching practice should be in 4<sup>th</sup> semester. A significant majority of the respondents (69%) agreed that teaching practice should be divided in two semesters. The mean score is 3.2 which supported the statement. A significant majority (75% with mean 2.3) disagreed with the statement that there should be two weeks gap for final lesson after teaching practice.
- Opinion of the students about School Facilities and School Record:** It is evident from Table 4 that majority of the respondents (70%) agreed with the statement that school teachers co-operated in teaching practice. The mean score is 3.6 which supported the statement. A significant majority of the respondents (83% with mean score 2.1) disagreed with the statement that school provides sufficient facilities for teaching practice. A majority of the respondents (62% with mean score 2.7) disagreed with the statement that staff room was available for teachers. 49 % of the respondents with mean score 2.9 disagreed with the statement that they learned the maintenance of the school record. A significant majority (94% with mean score 1.8) disagreed with the statement they learned the maintenance of finance register. A significant majority (88% with mean score 1.9) disagreed with the statement that they put attendance as a teacher in school. A significant majority (64%) of the respondents expressed their opinion that they participated in the activities of assembly.
- Opinion of the students about Supervision and feed back:** A significant majority of the respondents (84%) agreed with the statement that supervisors of the university check the lesson plan and provide feed back. The mean score is 3.9 which supported the statement. A majority of the respondents (78% with mean score 2.0) disagreed with the statement that school teachers provides feed back. A significant majority of the respondents (78% with mean score 2.0) disagreed with the statement that school teachers involved



in teaching practice. A significant majority of the respondents (64%) agreed with the statement that head of the school check the teaching learning process. The mean score is 3.4 which supported the statement.

## 6.2. Questionnaire for the Supervisors and Heads

- Opinion of the Heads and supervisors about teaching practice:** Majority of the respondents (74% with mean 2.4) disagreed with the statement that you are satisfied with the number of lessons in teaching practice. A slight majority (60% with mean 2.5) disagreed with the statement that school provides training in co-curricular activities in teaching practice. Majority of respondents (77%) agreed with the statement that teaching practice professional skill. The mean score is 2.7. Majority of the respondents (78 % with mean score 2.0) disagreed with the statement that duration of teaching practice is sufficient. A slight majority (51% with mean score with mean score 2.9) disagreed that staff room is available for teachers. Majority of the respondents (81% with mean score 3.9) agreed that school facilitates in teaching practice. Majority of the respondents (75% with mean score 3.6) agreed that supervisors evaluate the lesson plan regularly. 47% of the respondents with mean score 3.2 agreed that maintenance of school record is one part of teaching practice while 25% disagreed. Majority of the respondents (60% with mean score 2.4) agreed with the statement that regular school activities are affected during teaching practice.
- Suggestions of the Heads and supervisors about teaching practice:** 52% of the respondents viewed that Universities may construct its own laboratory schools for teaching practice. 59% of the respondents argued that there may be 2-3 lessons in a day. 81% of the respondents pointed out that duration of the teaching practice may be increased. 55% of the respondents viewed that more weightage may be given to head of the schools in final lesson.

## 7. Conclusion

- Majority of the respondents agreed that they plan lesson before class, designed activities and plan lesson in logical order.
- Majority of the respondents were of the view that they did not complete their lessons in a period and were not satisfied with the number of the lessons in the teaching practice.

- Majority of the respondents agreed that they participated in internal and external teaching practice and external teaching practice is more beneficial for professional development.
- Majority of the respondents were of the opinion that teaching practice is not the training of school responsibilities and training of co-curricular activities
- Majority of the respondents were not satisfied with the duration of the teaching practice.
- Majority of the respondents agreed that teaching practice should be divided in two semesters
- Majority of the respondents were of the opinion that they did not maintain the school record, finance register, put their attendance and school does not provide facilities like staff room.
- Majority of the respondent were of the opinion that university supervisors and head of the school check the lesson plan and provide feed back while school teachers do not involve in teaching practice.
- Majority of the supervisors were of the opinion that teaching practice enhance professional skill and school activities do not affected during teaching practice

## 8. Recommendations

- Duration of teaching practice may be increased
- The duration of external teaching practice may be increased
- Training of co-curricular activities may be provided during teaching practice
- Maintenance of school record may be the part of teaching practice
- Teaching practice may be divided In two semesters
- School may provide facilities for teaching practice
- University may construct its own laboratory schools for teaching practice

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Many thanks for your participation!

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