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THE GLOBALIZATION OF CURRICULUM IN AN ERA OF TRANSFORMATIONAL CHANGE

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Abstract

The impact of globalization over the past 15 years is changing the face of education. In just 10 years global change forces have changed the prevailing vision of education from a stable, domestically-oriented, enterprise focused on transmitting local knowledge values into a dynamic, competitive industry based in an international knowledge base and global values. This presentation will examine:

- The change forces that are reshaping our collective vision of education today.

- Key design features of a new millennium curriculum that will be relevant to the rapidly changing context of education in Southeast Asia.

- Conditions that support successful curriculum change in Thai and Southeast Asian schools.

The Globalization of Curriculum in an Era of Transformational Change

> I am firm in my belief that a teacher lives on and on
> through his students. I will live on if my teaching is
> inspirational, good, and stands firm for good values.
> Tell me how can good teaching ever die? Good
> teaching is forever and teachers are immortal. (Jesse
> Stuart, 1937)

Southeast Asia has witnessed a decade of transformational change such that children entering primary school today "cannot even imagine the world in which their grandparents lived and into which their own parents were born" (Drucker, 1995, p. 75). Since 1990, ASEAN nations have embraced greater political openness and integration into the global economy. A largely unforeseen consequence of this integration has been a whirlwind of change that threatens to overwhelm social and political institutions.

Yet, even with the massive political and economic changes observed in Southeast Asia, fundamental cultural norms have proven more resistant to global forces. As Ohmae has observed: "The contents of kitchens and closets may change, but the core mechanisms by which cultures maintain their identity and socialize their young remain untouched" (1995, p. 30). This frames the challenge of educational reform throughout the world where educational systems are struggling to keep pace with rapidly changing environmental demands (Fullan, 1993; Hallinger, 1998a, 1998b).

Nowhere is this observation more salient than Thailand. Until recently one of Asia's tiger economies, Thailand's economic growth has ground to a halt, due in part to inadequacies in its educational system (Bangkok Post, 1998a, 1998b; ONEC, 1998a). Thailand's schools were never designed to produce the highly motivated, independent thinkers and learners demanded by an information-based economy (MOE, 1996; ONEC, 1997a, 1998a). Today, Thai parents, school practitioners and policymakers agree that the capacity of school graduates to meet the challenges of the information age is at best uncertain.

Indeed, over the past decade, numerous planning documents published by Thai government agencies have eloquently articulated the need for a new and visionary set of

educational priorities (MOE, 1996, ONEC, 1997a, 1998a). Policymakers and educators alike have identified the urgent need for educational reforms that will foster economic competitiveness while preserving the national culture. For example, Professor Kriengsak Charoenwongsak of Thailand's Institute of Future Studies for Development has noted:

> If the trends [in enrolment and retention of primary and secondary school graduates] continued the number of secondary school graduates would double by 2002. . . However, increasing the quality of Thai products also involves improving the quality of education. The current emphasis on rote learning does not help students assume positions in the workplace which stresses problem-solving and other analytical skills. (Bangkok Post, 1998b, p. 2)

Needed improvements in educational quality are many: teaching and learning methods, management of schools, parental involvement, system restructuring, finance and budgeting processes and more. This paper focuses on curriculum reforms consistent with the evolving needs of the global transformation in which we are living. The paper examines:

- The context of education and the forces driving changes in schools;
- Challenges imposed on the curriculum of education by globalization;
- Implications for teachers and administrators.

The Context of Educational Change

The scope and purposes of schooling in Thailand and throughout the world have

shifted within the space of a decade (Caldwell, 1998; Fullan, 1993; Hallinger, 1998; Murphy, 1998). Even as recently as 1990, the purpose of Thai schools was to prepare a subset of the youth population with basic skills. Only students with promise and those from the societal elite received opportunities for education beyond six years. However, as the middle class grew over the past decade, so did educational opportunities for Thai youth. Thus, in 1993 Thailand expanded the scope of basic education to nine years and in 1996 to 12 years.

Basic education in Thailand is, however, just that: basic. Educational performance in most subjects lags behind that of students in other similar Asian countries (e.g., Singapore, Hong Kong, Philippines, Malaysia, Korea). In 1995 Thailand had 119 scientists and engineers per million of population. South Korea and Singapore had more than 2,500, while China had 350 per million people (Bangkok Post, 1998b). In the last five Science and Mathematic Olympic Competitions, Thailand has placed at the bottom among the competing Asian nations.

> In the latest competition in 1997, Thai students fared poorly in all
>
> subjects, particularly in the practical fields. In practical learning of
>
> chemistry, Thai students scored only 4 out of 40, and in physics
>
> they got a score of 2.5 out of 20. . . With such records. . . the time
>
> is right to. . . overhaul the teaching/learning system which fails to
>
> provoke thinking. (Santimetaneedol & Bunnag, 1998, p. 3)

Indeed, global economic competition has raised the stakes for developing students' cognitive knowledge, capacity for problem-solving, and their ability to perform a new range of skills in the workplace. Creativity, critical thinking, technological skills,

communication, teamwork, practical use of English, social responsibility and life-long learning have assumed higher priority as national educational goals (MOE, 1996; ONEC, 1998a). *None of these educational goals* received emphasis in the traditional curriculum of Thailand prior to 1995.

The global era is challenging traditional ways of living and working throughout the world (Naisbitt, 1997; Ohmae, 1995; Rohwer, 1995). Notably, unlike in prior eras, these arrive (often uninvited) both from outside our national borders and our fields of practice. Drucker has observed that this trend is true for most fields, but suggests that it has special implications for education.

> [I]t is a safe prediction that in the next 50 years, schools and universities will change more and more drastically than they have since they assumed their present form more than 300 years ago, when they reorganized around the printed book. What will force these changes is in part new technology, such as computers, videos, and telecasts via satellite; in part the demands of a knowledge-based society in which organized learning must become a lifelong process for knowledge workers; and in part new theory about how beings learn. (Drucker, 1995, p. 79)

This is especially true in education where both the goals of education and the policies and practices designed to attain them increasingly arrive from abroad.

Globalization of an Educational Ideal

A key change force in this era of globalization has been the expanded information, communication, and transportation network. Nations throughout the region have ready access to global images and trends via the HBO, BBC, CNN and, the Wall Street Journal. In fact, the same news reports, movies, advertisements, sporting events, and soap operas beam into homes in Bangkok, Jakarta, Kuala Lumpur, Hong Kong and San Francisco. Japanese futurist Kenichi Ohmae (1995) contends that developments in information technology have combined with more fluid national boundaries to create a new context for all organizations.

 An unanticipated consequence of this information revolution is that consumers now define the meaning of *quality education* globally, rather than locally or even nationally. Concerns over national competitiveness now shape education policy decisions made from Ottawa to Hong Kong. Increasingly, policymakers (and parents) throughout the Asia Pacific region view a quality education in similar terms.

As Moses Cheng, member of the Hong Kong Education Commission, has observed: "Young people must have a global perspective. . . They need to have high personal integrity, strong language ability, be computer literate, able to think independently, and be creative" (1998, p. 24).

This statement of Hong Kong's educational aims is notable in several respects. First, essentially the same statement of aims could be found in Sydney, London, New York, or Bangkok. Second, this is an expanded and ambitious agenda for educational systems that are under criticism globally. Third, it is an agenda that will require substantial change in

the capacities of the people who comprise the educational system as well as in its organization and practices.

Moreover, these purposes and practice of schooling are not static. The pace of innovation in many fields (e.g., computer science, biology, medicine, biochemistry, library science, physics, law, nursing, education) has accelerated greatly in recent years. Consequently, knowledge is being viewed much more dynamically than in the past.

This has profound implications for the practice of schooling. What is learned in schools today, may well be obsolete in just a few short years. As Engel has noted:

Those who embark on higher education now will still be active in professional practice well towards the middle of the next century. They will practice during a period of accelerating and massive change. Change, as it relates to their profession, will make self-directed learning throughout their life a sine qua non. . . How then are institutions of higher education to meet their challenge of creating capable citizens for the next century? (1991, pp. 45-46)

In fact, this challenge extends through all levels of schooling. Barth (1997) has defined the *at-risk student* as, "any student who leaves school before or after graduation with little possibility of continuing learning." Are schools meeting their responsibility by simply ensuring that students have mastered a certain set of facts? For educational systems that have traditionally been organized in order to teach a static curriculum, this represents a major problem. Schools, while still in the business of teaching content, will need to revamp their methods of teaching/learning in order to better teach student to become independent, self-directed, life-long learners.

The Evolution of Educational Policies and Practices in Southeast Asia

Southeast Asia's evolving educational goals have already begun to redirect the methods of education. As with the goals themselves, virtually all of the educational policy reforms of the past decade originated in forces generated outside of Southeast Asia. Lets take a moment to review a few of these reforms and their implementation: School-based Management (SBM), Information Technology (IT), Quality Education, Curriculum Integration, Creativity, Parental Involvement.

Teaching is the core process of schooling and the one that remains highly resistant to change throughout the world. In Southeast Asia it faces a special challenge since these "global" reforms originated in cultures that operate from different assumptions than those of the local cultures. In fact, the very meaning of *learning and teaching* encompassed in the constructivist tenets of the new teaching and curriculum reforms differ from the traditional model in Asian schools. As Sin-ming Shaw has recently observed:

> Blaming Asian schools for focusing on memorization -- as opposed to "thinking" – is too pat an excuse, as schools reflect the basic values of a society. It is ingrained in the Asian psyche that "correct" answers always exist and are to be found in books or from authorities. Teachers dispense truth, parents are always right and political leaders know better. In executive-led societies such as China and Hong Kong, leaders act like philosopher-kings, often uttering unchallenged banalities. Senior officials sometimes resemble the powerful palace eunuchs of the past dynasties: imperial, unaccountable, incompetent. Questioning authority, especially in public life, disrespectful, un-Asian, un-Confucian. (Shaw, 1999, p. 23)

Viewing educational reform in Southeast Asia from this perspective, we begin to

conclude that reform in the schools is part and parcel of a transformational change in the Southeast Asian societies at-large. Proposed changes in classroom curriculum and teaching mirror proposed changes in decision-making at the school and system levels, and also patterns of citizen participation in the society as a whole. Therefore, students, teachers, administrators and parents together face the same challenge of changing their "mental models" of teaching and learning before they can implement these practices successfully (Senge, 1990).

Reference to educational reform in Singapore is instructive here. Singapore's schools have adopted the mission: "Thinking schools, a learning society." This mission emphasizes the connection between schools and society. It reflects the belief that thinking schools involve various stakeholder groups – students, teachers, administrators, parents, community –in decision-making. A thinking school serves students who are learning to think for themselves and to create knowledge. A thinking school develops graduates who are motivated and able to learn throughout their lives, thereby creating a learning society. Thinking schools empower learners, transforming them into leaders who can take responsibility for themselves and the social institutions of their society.

Taken together, recent reforms throughout the region suggest a similar direction. This is indeed an ambitious vision for schools regardless of whether they are located in Singapore, Hong Kong, Bangkok or Kuala Lumpur. Achieving this will require both visionary leadership and skillful management at all levels of the educational system. This sets the context for leading change in Southeast Asia's schools.

Curriculum Challenges in a Global Era

I would identify four specific challenges for the curriculum of schools in this global era:

1. Developing citizens who know, understand, and respect traditions of their local cultures;

2. Developing citizens who know, understand, and respect traditions of the global culture and other nations;

3. Developing citizens who are able to apply their knowledge with an ethical awareness;

Know and Respect Local Traditions

Schooling in the past 20 years has increasingly focused on the reduction of knowledge in testable knowledge. Trends in education and educational reform such as the emphasis on standards-based curricula have forced teachers towards the cognitive domain. This trend has reinforced the movement away from viewing education as *cultural transmission.*

In the 1940's, Jesse Stuart, an American educator, characterized schools as "the thread that runs so true." By this he meant that schools -- teachers -- weave the *fabric* of society. When they do their jobs well, they help the society to maintain its cultural integrity. During the past few decades, Western societies have witnessed the fragmentation of the nuclear family and a gradual decline in the moral authority of religious institutions. This has placed great pressure upon schools to maintain the cohesiveness of society.

Both forces from the global culture and patterns of cross-national immigration have created a similar trend in Asia as well. As Ohmae notes:

The essential continuity between generations, on which every society necessarily depends for its integrity and survival, has begun to fray. . . The web of culture used to be spun out of stories a child heard at a grandparent's knee. In today's increasingly subnuclear families, it derives from a child's experience with interactive multimedia. (1995, p. 30, 37).

This leaves schools as the primary social institution responsible for *cultural transmission*. Senior Minister Lee Kuan Yew of Singapore has observed:

> We are all groping towards a destination which we hope will be identifiable with our past. . . We have left the past behind and there is an underlying unease that there will be nothing left of us which is part of the old. (Economist, 1994)

This is no different than in Thailand where Kriengsak Charoenwongsak (1998) has observed:

> The television has become a distribution centre for a universal culture. Instead of learning from others with whom they have a close relationship, Thai children now imitate the same set of movie stars, sing songs from the same set of Thai or foreign pop stars, and imitate behavior from the same movies -- all compliments of television.

This is, in itself, is a fascinating development since much of the news about education in Asian newspapers tends to focus on the need to upgrade students' cognitive performance. Today schools must reassert their role as vehicles for helping societies

adapt to social change. This has been noted in Malaysia, for example where cultural integration and preservation takes a central role in the school system.

> Bergotong-royong or "community-effort" is a custom of
> Malaysians. . . It is important to instill the spirit of
> community effort in the consciousness of all Malaysians,
> particularly the young. The spirit of goyong-royong sows
> seeds of neighborliness and strengthens unity.   (Tun Uda,
> 1990, p. 16)

The recent economic downturn in ASEAN nations has forced policy makers to reexamine many assumptions concerning the adequacy of education as concerned national development. Rapid -- perhaps overly rapid -- integration into the global economy has led many Asians to turn their backs on their local culture. This meant paying little attention to traditional norms and values. In Thailand, to judge by advertisements for MBA programs in the newspapers, one might conclude that every Thai university graduate was intent on becoming a businessman. What would a society be like that no longer valued the arts, religion, music, education and other humanistic concerns?

These observations suggest that the cognitive curriculum needs to be balanced against the deeper needs of society for cultural continuity. This would require greater emphasis on non-cognitive domains, a trend also consistent with Howard Gardner's notion of "multiple intelligences".

Become Aware and Respectful of Other Cultural Traditions

In a global era, it would foolish to think that simply grounding students in the traditions of their own societies is sufficient. Children today are increasingly the children

of a global culture. There are no indications that this will change anytime soon. Indeed the continuing development of the internet and other communication technologies is only likely to further accelerate this trend. Ease of transportation continues to make the world into a global village.

Yet in a sense the more that the world becomes smaller, the greater the likelihood of conflicts both large and small. In a global village the possibilities of misunderstanding become even greater as people interact more closely than in the past. The possibilities for miscommunication and misunderstanding increase dramatically with the increased rate and breadth of interactions.

The September 11th disaster highlighted the dangerous gap in understandings that exist between different tribes in the global village. Perhaps of even more lasting significance is the continued inability of peoples from the relevant camps to understand each other. This represents one of the great educational challenges of the future: developing the ability to communicate beyond the boundaries of our own cultural heritage.

These capabilities undoubtedly begin with linguistic capabilities. At this point in time, English has become the dominant language of international communication. Nations that do not have this capacity will likely encounter slower economic development. Opportunities will migrate towards nations that develop this capacity; Singapore and Hong Kong are good examples.

Although capability in English is a necessary goal for educational attainment, it is insufficient. Indeed, the smug complacency of nations for whom English is the mother tongue is likely to come back to bite them in the future. The fact that other nations are

relying on English appears to have reduced the urgency of Americans, British, Australians and Canadians to learn the languages of other nations. This may induce an unintended sense of cultural complacency if not implicit cultural superiority.

Consequently, it is the case that citizens of all nations should have capabilities in languages beyond their mother tongues in the future. This would be an appropriate curricular goal for the future.

However, linguistic capabilities only begin to touch on the capacities needed for cross-cultural understanding and communication. This highlights the importance of developing understanding and appreciation of differences in values, customs, rituals, and predominant practices of other nations and cultures. In the ethnocentric curricula of most nations, such sensitivities and capacities would get relatively little attention

What is the role of the school's curriculum in such a context? To date schools have implemented a variety of curricular approaches including supplementary, integrative and wholistic approaches. Supplementary approaches tend to add additional curricular goals or content. Schools will add units onto the regular curriculum about the cultures of other nations. On the surface, this is the easiest approach in theory, but in practice contributes to the "bloating" of the curriculum through incremental additions.

Integrative approaches seek to inject cultural understandings into the curriculum by incorporating cultural topics into the current curriculum. Cross-cultural content may be used instead of traditional content. Multi-disciplinary units, such as in a problem-based unit, may also take a cultural focus.

Wholistic approaches represent an interesting exception. A school in New York, the Ross School, has organized its curriculum from grades five through 12 around the

cultural history of the world. Each year students are steeped in the cultural development of different societies of the world in a different era. All subjects – from math and science to art, music and history -- are organized around the cultural development of societies. This places both culture and curriculum at the center of the school's life.

Developing Knowledge-able Students

> So he had grown rich at last and thought to transmit
> to his only son all of the cut and dried knowledge
> which he himself has purchased at the price of his
> lost illusions; a noble last illusion of age. (Balzac)

This quotation from the French writer, Balzac, highlights the difficulty of transferring knowledge from one generation to another. Any real learning requires the learner to integrate the new concept or idea into his/her current mindset of knowledge and attitudes. Learning is a complex process that goes beyond simply telling and showing.

Yet, an inspection of the typical classroom reveals little change from the classroom of 100 years ago in this respect. The process of learning is still too often conceptualized as a simple transmission process in which a "body of knowledge" is passed from teacher to pupil. This is indeed an illusion that we can no longer afford to support.

A teacher of mine, a storyteller, used to say: Seeing and hearing is believing, but eating is knowing (personal communication Brother Blue aka, Hugh Morgan Hill). This bit of practical wisdom convey the belief that knowledge is something that each individual must interpret and make sense of in his or her own personal way.

The curricula of the past century was limited in two major respects. First, most

school curricula have focused upon the cognitive domain to the exclusion of motor and affective domains. Moreover, within the cognitive domain, there has been a heavy upon verbal and mathematical skills. Howard Gardner's theory of multiple intelligences has revealed the limited vision of human capacities that this approach to curriculum assumes. The curriculum of today must go beyond the cognitive domain and into the development of other intelligences (e.g., spatial, musical, kinesthetic, artistic, emotional).

Going a step further, the almost exclusive concern for cognitive development has also been limited to a narrow band of capability. The famous University of Chicago psychologist, Benjamin Bloom, identified a taxonomy of educational objectives within the cognitive domain: knowing, comprehending, applying, analyzing, synthesizing and evaluating. Most curricula in use today are grounded in developing students' abilities to remember facts and to understand concepts. At all levels of education and in virtually all nations, there was traditionally little emphasis placed on the ability of students to apply or use knowledge at higher levels of Bloom's taxonomy.

There are numerous models for working towards the attainment of this vision of broader and deeper knowledge development among students. Problem-based learning represents an approach that holds promise in this regard.

Despite the ubiquitous use of problem-based learning in medical education, there is no agreement on what it means. Problem-based learning is a genus with numerous species. The genus apparently has the following characteristics:

- the starting point for learning is a problem (i.e., a stimulus for which an individual lacks a ready response);

- the problem is one that students are apt to face as future professionals (see Figure 1);

- the knowledge which one is expected to acquire is organized around problems rather than the disciplines;

- students, individually and collectively, assume a major responsibility for their own instruction and learning; and

- most of the learning occurs within the context of small groups rather than lectures. (Bridges & Hallinger, 1993)

Problem-based learning employs an integrated, multi-disciplinary approach to curriculum. It seeks a deeper rather than broader approach to the integration of knowledge and focuses upon higher order thinking.

Problem-based learning has been used most extensively in medical education. However, since its first systematic use in medical education during the early 1980's, it has spread widely into other fields. There are now examples of the use of PBL in most fields of tertiary education as well as in K-12 schooling.

Research conducted into the use of problem-based learning finds that it has the potential to address many of the curriculum issues noted in this paper. The aims of problem-based curricula include:

- Adapting to and participating in change,

- Dealing with complex, swampy problems and making reasoned decisions in unfamiliar situations,

- Reasoning critically and creatively,

- Adopting a more universal or holistic outlook,

- Practicing empathy, appreciating others' points of view,

- Collaborating productively in groups or teams,

- Identifying own strengths and weaknesses and undertaking appropriate remediation. (Engel, 1991, pp. 45-46)

It is beyond the scope of this paper to go into great detail concerning a particular curricular or instructional approach. We would, however, refer the reader to other sources in order to understand the potential of this particular method as one of a number that should comprise the repertoire of any "new millennium school".

The Challenge of Curriculum Reform in Thailand: *Jing Jai, Jing Jung, Nae Norn*

It is a luxury of academics to wax on about the ideal construction of school curricula. Putting that into practice in reality is another story. In this section of the paper, I will review conditions that support curriculum change in Southeast Asian schools, using Thailand as an example.

In general, social and political institutions that are shielded from changes in the world at-large adapt more slowly than other institutions of society (Rohwer, 1996). Schools, churches, and government fall into this category, as they seldom feel the pressure of market forces. Indeed, schools have always been among society's most conservative institutions. Since they are responsible for transmitting the culture to youth, they tend to change at the pace of change with which the majority of society is comfortable (Tyack & Hansot, 1982).

Educational decision-makers in Bangkok cannot understand why principals and teachers do not respond more readily to the need for change. Yet, in practice, the MOE

has shielded local schools from the global change forces that underlie reform. By keeping schools highly dependent upon central directives, the MOE has unwittingly – perhaps -- reduced the imperative for change at the local level. One school director from Northern Thailand attributed the lack of substantive educational change to three cultural norms of Thailand's educational system: *jing jai, jing jung, nae norn*. In doing so, he also identified three conditions that seem necessary for curriculum change to take place in Thailand.

He asserted that the rhetoric of the Ministry of Education lacks a fundamental Thai trait, *kwarm jing jai* (i.e., sincerity). Few local administrators or teachers find the rhetoric of local empowerment supported by the substantive behavior of MOE decision-makers. When those at the local level fail to see their bosses conform to the same changes they have mandated for others, it indicates a lack of sincerity. Culturally, this reduces the need for staff to venture beyond surface compliance.

Lacking *kwarm jing jai,* Bangkok decision-makers are unable to fulfill another necessary condition for bringing about change in a Thai organization: *gumlung jai*. *Gumlung jai* is the encouragement or moral support that Thai people receive from their social group, especially when engaged in a difficult task (Mulder, 1996). In the current context, the perception that MOE decision-makers lack *kwarm jing jai* or sincerity renders them unable to offer *gumlung jai* to the schools in any meaningful way.

While *support* is also needed to foster change in Western cultures, there are some essential differences. First, in Thailand's community-based culture, change is fundamentally a group not an individual phenomenon (Hampden-Turner & Trompenaars, 1997). Even the very term *gumlung jai* often refers to a *group* giving *public* support or

encouragement to an individual in need. In contrast to the West, the individual in Thailand almost never exists except in relation to his/her reference group (Holmes & Tangtongtavy, 1996; Mulder, 1996).

Also salient to this contrast, Thailand's heroes and heroines are not mavericks who defy convention to find the new path. In Thailand, American heroes like Chuck Yeager, the Lone Ranger, Daniel Boone, the Marlboro man, and Steve Jobs would not be people with the *right stuff* to make a lasting cultural impression. Thai people are more likely to move (or change) with their peer group, and the group is most likely to move in response to a strong morally persuasive message from above.

Finally, in Thai culture, feelings take precedence over reason (Holmes & Tangtongtavy, 1996; Mulder, 1996). In Thailand it is common to describe the resolution of a conflict in terms of two parties developing mutual understanding or *kwarm khow jai gun*. The source of the mutual understanding, however, is the heart, not the head. That is the Thai word for understanding -- *khow jai* -- means to "enter the heart" not the head! This has powerful implications for change implementation. The best-laid plans of policymakers will never see the light of successful implementation unless the feelings of staff are sincerely acknowledged and supported. Paradoxically, this is the case even though surface compliance is easily obtained because of the cultural tendency to *greng jai* or defer to the feelings of one's superordinates.

As suggested earlier, the seriousness of purpose for educational reform is often unclear to local staff. As one principal noted, "There is little relation between the idea of reform as conceived in Bangkok and implementation in the provinces." In Thai this translates into a lack of seriousness of purpose or *kwarm jing jung*. Communication

remains one-way, from the top down and local school leaders remain highly cynical about the intent of Ministry decision-makers.

A recent survey of almost 800 staff generated relevant data on communication in East Asian corporations (Council of Management Communication, 1996 in World Executive's Digest, 1998). Sixty-four percent of staff did not believe what management told them. Sixty-one percent did not feel well-informed of plans. And 54 percent did not feel that decisions were well explained. While we do not have comparable data on the perceptions of Thai teachers and principals, we suspect a similar pattern would prevail. Cultural norms and institutional structure each play a role in this problem of communication.

Recent large investments in computers represent an example of this how a lack of seriousness plays out in reform implementation. Since 1996, the MOE invested millions of baht into computer hardware and software in response to the acknowledged imperative for technological development in schools. The MOE implemented the policy in a traditional "one size fits all" manner without preparing schools first. Consequently, computers were even sent to schools that still lacked electricity. Development of software for use in the schools got bogged down in corruption among the vendor and MOE officials. Training for teachers was unevenly distributed and of highly variable quality. This type of implementation breeds cynicism among local staff concerning the seriousness and motives of Bangkok decision-makers.

The hard work of articulating the moral and practical basis for reform and the meaning behind new methods has simply not been done in Thailand. This problem is by no means limited to Thailand or Asia. For example, as an American journalist recently noted:

[In the USA] Republican voters have not yet been persuaded that "economic change and the free operation of the market, can be exciting rather than frightening." The key words there are "can be". But change often *is* frightening, and the world over, governments and commentators have done too little to explain why such change is necessary and how its wounds can be healed.

(Newsweek, March 4, 1996, p. 9)

The communication gap suggested here relates directly back to the systemic tendency to believe that telling others to *do it* is an efficient means of fostering change. We noted earlier the absence of a nationally recognized moral voice for educational reform in Thailand. Prime Minister Chuan Leekpai started to tell this story to the people, but was not in office long enough to finish. Until the nation's leadership does use its moral authority to articulate the why and how of educational reform, systemic change will not take place.

The third condition noted by our colleague, *nae norn*, refers to the need for certainty. Of course a degree of stability is essential for effective policy implementation in any context. However, certainty takes on special significance within the Thai institutional system because of its highly political nature.

In Thailand, educational policy priorities change as frequently as the government. During the past decade no coalition government served out its full term of office. Not one Minister of Education was in office for even a full year. Since the Minister is appointed by his coalition party, each entering Minister must stamp his (and his party's) name on

education policy quickly. This generally means first canceling out the favored reforms of his immediate predecessor.

For example, when the most recent Minister of Education assumed office, his first major policy decision was to cancel the ambitious investment in computers initiated by the prior Minister. With great fanfare and concern over the "efficiency" of expenditures, he shifted the funds towards teacher welfare. Notably, the former Minister's political supporters were to be found among private sector contractors. The new Minister's party counted the teacher's federation among its supporters.

This source of systemic uncertainty is further compounded by rapid turnover of senior bureaucrats in the Ministry of Education. The Permanent Secretary of Education, his Deputies, and the various Department Directors are seldom in position for more than one or at most two years. As they reshuffle annually, implementation priorities shift with repercussions down through the institutional system.

Political uncertainty is hardly unique to Thailand. Yet the speed with which Thailand's policy goals and implementation priorities turn over is extraordinary when compared with regional countries such as Malaysia, Singapore, Hong Kong, or the Philippines. This translates into a high degree of uncertainty among staff at the local level.

Implementation of educational reform in Thailand is severely handicapped by norms of the institutional system as well as by certain norms of Thai culture. The goal of local empowerment in schooling runs counter to the existing structure of the educational system. As other nations have found, it is difficult for a bureaucracy to change its very purpose and traditional operating procedures. Moreover, norms of Thai culture lead staff

(and parents) who are the targets for empowerment to engage in a cultural dance with their superiors. The result is an absence of change beyond the surface indicators compiled onto a checklist. Educational reform has evolved into shared mythology of change consistent with the cultural and institutional norms of Thai society.

Looking to the Future

One of America's founts of folk wisdom, Yogi Berra, one said, "The future doesn't look half as good as it used to." The challenges and opportunities inherent in the current era of transformational educational and global change certainly echo that sentiment. Mankind faces new opportunities brought on by unprecedented global political, economic, and technological change. Yet these same opportunities come with risks and responsibilities. As has been the case in the past, educators are among those who hold the keys that will lock or unlock the doors of opportunity for youth.

This paper began with a quote from my teacher, Jesse Stuart. It would be fitting to close it with another that reminds us that as educators we have a sacred moral responsibility.

> The struggle of a youth to amount to something worthwhile is the greatest objective he can have in life. My parents and teachers inspired me. They changed my life. I am proud that I have been a teacher and am one today. Teaching is something above and beyond teaching lessons and facts from books. It is this but more too. It is helping youth to find a path of his own that will

eventually lead him through fields of frustration until he finds

himself. (Stuart, 1949)

This quotation further reminds us that the reform of education is a quest. A quest is not just a goal or a mission, but is in fact a journey – a journey with an end in mind that may or may not be achievable in our lifetime. However, it is a journey worth undertaking. That is the role of education and educational reform. It is not a set of activities to be completed by a certain date in order to achieve specific targets, though it may include that as well. The education that matters, that *makes a difference* in the lives of children and nations, is education of the heart and mind. In the words of Don Quixote, the hero of Cervantes' classic book, Man of La Mancha: "I have come into a world of iron to make a world of gold."

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9.

NEW PARADIGM OF BORDERLESS EDUCATION: CHALLENGES, STRATEGIES, AND IMPLICATIONS FOR EFFECTIVE EDUCATION THROUGH LOCALIZATION AND INTERNATIONALIZATION

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Abstract

The fast and huge transformations due to globalization and information technology are creating great impacts on the future of nearly every society, community, institution and individual in different parts of the world. Responding to the serious challenges from all these impacts and transformations, our education inevitably has to change fundamentally towards a new paradigm in order to pursue a new future for our new generations as well as our society in such a new era of globalization and transformation.

Foreseeing the macro trends of development, my keynote speech will present *a new paradigm of borderless education* that is completely different from the traditional site-bounded paradigm. The new paradigm aims to develop students' contextualized multiple intelligence (CMI) and creativity and create unlimited opportunity for students' life-long learning through individualization, localization, and globalization in the educational process. My presentation will explain the strategies and examples of localization and globalization to pool up the various resources and intellectual assets from multiple local and international sources to support borderless education. A self-learning theory in a networked human and technological environment will be highlighted.

Particularly, my speech will propose a new *Platform Theory* to illustrate why and how school-based platform and central education platform should be necessarily developed to provide an intelligence-intensive, knowledge-intensive and technology-intensive platform to consolidate the efforts, intellectual assets and resources from localization and globalization. The platform will provide unlimited networks and opportunities for every student and teacher to maximize their potential and performance in borderless learning and teaching. These platforms for learning will be nationally strategic for each society's long-term development in a context of international competitions.

With the implications from the new paradigm of learning and the platform theory, my speech will illustrate by examples how teachers can change their roles and teaching styles from teacher-centred to student-centred in the educational process and how the curriculum can be changed from the subject knowledge-based to intelligence-based in a practical way.

Finally, my speech will urge educational reforms focusing on paradigm shift in learning and teaching with aims to maximize opportunities for students' effective life-long learning and their pursuit of a new future in the new century.

Introduction

The challenges of the new millennium such as the rapid globalization, the tremendous impacts of information technology, the international transformation towards knowledge-driven economy, the strong demands for societal developments, and the international and regional competitions have driven numerous educational changes in the different parts of the world (Cheng & Townsend, 2000). Policy-makers and educators in each country have to think how to reform education for preparing their young leaders to more effectively cope with the challenges in the new era (Armstrong, Thompson, & Brown, 1997; EURYDICE European Unit, 2000; Hirsch & Weber, 1999; Kogan & Hanney, 2000; Lick, 1999; Mauch & Sabloff, 1995; Mingle, 2000). In facing the fast changing environment, many policy-makers and educators get confused with uncertainties and ambiguities and lose their directions in the rapid globalization. There is urgent need of a comprehensive framework for understanding the impacts of rapid developments and advancing implications for innovations in education.

In response to this need, my previous work Cheng (2000) has pointed the necessity of paradigm shift in education and reforms to meet the challenges in both local and international communities in the new millennium. Adapted from the key theories in this work, my paper aims to illustrate how education can be transformed from a traditional site-bounded paradigm towards a new triplization paradigm for borderless education. In the new education, the development of Contextualized Multiple Intelligence (CMI) of students and the processes of globalization, localization, and individualization in education will be the core to create unlimited opportunities for teaching and learning and to develop a new generation of CMI leaders and citizens in both local society and global

36

village. It is hoped that the proposed new paradigm of borderless education will provide innovative ideas and possibilities for reforming education in different parts of the world to meet the challenges for the future.

Challenges from the Rapid Local and Global Transformations

As mentioned above, the serious challenges in the new millennium include the rapid globalization, the tremendous impacts of information technology, the international transformation towards knowledge-driven economy, the strong demands for societal developments, and the international and regional competitions. All these are in fact the challenges to the traditional thinking about the nature and developments of the world, the society and the human being, and asking for a new thinking about the future.

Challenges to the Traditional Thinking about the World, Human Nature, and Development

As shown in Table 1, the traditional thinking perceives that the world has limited if not none globalization, mainly in the economic and social aspects. All the nations in different parts of the world are loosely related, if not isolated, in only some limited areas especially in the economic aspect. Countries have serious competitions and conflicts more than sharing and collaboration. As a whole, they are loosely coupled with some limited international collaborations and interflows (Beare & Slaughter 1993; Naisbitt, 1984).

Traditionally, the human nature in such a context is mainly assumed as an economic person or a social person in an industrial or business society. Both individuals and the society pursue narrowed developments, mainly on some aspects such as economic, social, or political developments. School or vocational education is assumed necessary to providing the needed manpower for certain developments of a society at some stages (Cheng, Ng & Mok, 2002; Cheng, 1995). Therefore, the need for life-long learning or for a learning society may not be so important. The society is an industrial or agricultural society emphasizing on some types of intelligence or knowledge related to the existing stage of development of a society. Individuals are expected to be a citizen with bounded type of knowledge or skill that meet the need of society at a certain stage of development.

But in the emerging new thinking (Cheng, 2000), it assumes that the world is in multiple globalization including technological, economic, social, political, cultural, and learning globalizations. Also, these globalizations are increasingly interacting in the whole world. The world is moving very fast to become a global village, in which different parts of the world are rapidly networked and globalized through internet and different types of IT, communications, and transportation (Albrow, 1990; Naisbitt, & Aburdence, 1991). All countries and areas have more and more common concerns and sharing. Also, the interactions between nations and people become boundless, multi-dimensional, multi-level, fast, and frequent. They become more and more mutually dependent with international collaborations, exchanges, and interflows.

In the new thinking, the human nature in a social context of the new millennium is assumed to be multiple, as a technological person, economic person, social person, political person, cultural person, and learning person in a global village of information, high technology, and multi-cultures. Both individuals and the society need multiple developments in the technological, economic, social, political, cultural, and learning aspects. Life-long learning individuals and a learning society are necessary to sustain the continuous multiple developments of individuals and the society in a fast changing era (Drucker, 1993, 1995). The society has to become towards a multiple intelligence society that can provide the necessary knowledge and intelligence base and driving force to support the multiple developments. And the individuals have to become towards a multiple intelligence citizen who can contribute to the development of a multiple intelligence society.

Table 1: Challenges to the Traditional Thinking about
The World, Human Nature, Development of Individuals and the Society

New Thinking	*Traditional Thinking*
About the World	
• **Multiple Globalization**: including technological, economic, social, political, cultural, and learning aspects	• **Limited Globalization**: mainly in economic and social aspects
• **Global Village**	• **Multi-Nations loosely related**
• **Boundless Multi-dimensional and Multi-level Interactions**	• **Limited Interactions**
• **Mutual Dependent**	• **Loosely Coupled**

About the Human Nature	
• **Multiple Person:** as technological person, economic person, social person, political person, cultural person, and learning person	• **Mainly as Economic Person or Social Person** in an industrial or business society
About the Development of Individual and Society	
• **Multiple Developments:** technological, economic, social, political, cultural, and learning	• **Narrowed Developments:** mainly focus on some aspects such as economic, social, or political
• **Life-long learning individuals and a learning society** are necessary to sustain the continuous developments of technological, economic, social, political, and cultural aspects of individuals and the society	• **School or vocational education** is necessary to provide the needed manpower for certain developments of a society at some stages; the need for life-long learning or for a learning society may not be so important
• **Towards a multiple intelligence society** that can provide the necessary knowledge base and driving force to support the multiple developments	• **Being an industrial society** emphasizing on some types of intelligence or knowledge related to the stage of development of a society
• **Towards a multiple intelligence individual** who can contribute to the development of a multiple intelligence society	• **Being a person with bounded knowledge,** who has the type of knowledge or skill that meet the need of society at a certain stage of development

Challenges to the Traditional Thinking About the Education Environment and Aims of Education

As shown in Table 2, the traditional thinking assumes that the education environment is mainly characterized by the needs of local community, of which is slowly changing with moderate uncertainties and complexity. Thus, the boundaries of schools and the education system are assumed to be relatively stable and certain. Teachers and students rarely interact with the "real world" in their teaching and learning. Students enter the 'real world' only after graduation or leaving schools. Educational reforms are often limited and superficial mainly as a reaction to the raised public accountability and local concern. From this paradigm, the aim of education is to equip students with the necessary skills and knowledge to survive in a local community or to support the development of a society particularly in the economic and social aspects at a certain stage.

But according to the new thinking about the world and development, there is different thinking about education. The education environment is very fast changing and becoming very complicated and full of uncertainties and ambiguities. The boundaries of schools as well as the education system become unclear and disappearing. Students and teachers often interact frequently and intensively with the "real world" in learning and teaching (Caldwell & Spinks, 1998; Townsend, 1999). Continuous educational reforms and developments are inevitable due to various local and global challenges emerging from this changing education environment.

In such a context, the aim of education is to support students to become contextualized multiple intelligence (CMI) citizens who will be engaged in life-long learning and will creatively contribute to the building up of a multiple intelligence society and a multiple intelligence global village.

Table 2: Challenges to The Traditional Thinking about
The Education Environment and Aims of Education

New Thinking	*Traditional Thinking*
Assumptions about the Education Environment	
• **Triplization**: Education environment is characterized by globalization, localization, and individualization • **Fast Changing**: Complex, full of uncertainties, and changing very fast • **Disappearing Boundary**: Unclear and disappearing school boundary; Students and teachers often interact with the'real world' in learning and teaching • **Continuous Development**: Continuous educational reform and development are inevitable due to various local and global challenges	• **Local Needs**: Education environment is mainly characterized by the needs of local community • **Slowly Changing**: Moderately uncertain and changing slowly • **Stable Boundary**: Still stable and certain within school boundary; Students enter the 'real world' only after graduation or leaving schools • **Limited Reform**: Limited and superficial educational reforms due to the public accountability and local concern
Assumptions about the Aim of Education	
• **Develop Multiple Intelligence Citizen**: To support students to become a contextualized multiple intelligence (CMI) citizen who will be engaged in life long learning and will creatively contribute to building up a multiple intelligence society and a multiple intelligence global village	• **Equip Citizen with Knowledge and Skills**: To equip students with the necessary skills and knowledge to survive in a local community or to support the development of a society particularly in the economic and social aspects at a certain stage

Contextualized Multiple Intelligences & Education

The challenges in current local and global transformations ask for new education for the future of our next generations. This new education emphasizes on development of multiple intelligence.

Howard Gardner (1993) suggested that there are seven human intelligences, including musical intelligence, bodily-kinesthetic intelligence, logical-mathematical intelligence, linguistic intelligence, spatial intelligence, interpersonal intelligence, and intrapersonal intelligence. This biological perspective of multiple intelligences may be useful to understand individual's cognitive competence in terms of a set of basic abilities or "intelligences" (Gardner, 1993). When we want to develop a new generation of leaders to lead the community in a context of complicated technological, economic, social, political, and cultural environments, this perspective may be too " basic" and limited and does not have a strong relevance to education. Comparatively, this biological typology of multiple intelligence may be useful to design curriculum and pedagogy for early children education or lower primary education to develop their basic abilities, but it is not so sophisticated enough for education that should be highly contextualized to the social, economic, political, cultural, and technological developments (Berman, 1995; Guild & Chock-Eng, 1998; Guloff, 1996; Mettetal & Jordan, 1997; Teele, 1995).

According to Cheng (2000), the human intelligence can be contextualized and categorized into the following six *Contextualized Multiple Intelligences* (CMI), including *Technological Intelligence, Economic Intelligence, Social Intelligence, Political Intelligence, Cultural Intelligence,* and *Learning Intelligence*.

The definitions of these contextualized multiple intelligences can be summarized as shown in Table 3. It is assumed that human nature in the complicated contexts can be classified as technological person, social person, economic person, political person, cultural person, learning person, and even contextualized multiple person. To different persons, they may have different strengths in their contextualized intelligences because of different reasons such as their previous education, personal innate characteristics, family backgrounds, community culture, etc. Some persons are stronger in technological intelligence or economic intelligence but the other may be stronger in social intelligence or cultural intelligence. Given the societal and global contexts are so complicated, diverse, multiple, fluid, and challenging, it is quite reasonable to expect that the new generations should have at least some of the contextualized multiple intelligences to meet the diverse challenges in such complicated contexts in the new millennium. It means that education in this new era of globalization, diversity and information technology should develop students as CMI leaders and citizens to lead the new society and the new world, even though they may still have one or two specializations in their future career.

Table 3:

Contextualized Multiple Intelligences and Expected Outcomes of Education

Human Nature in Social Contexts	Contextualized Multiple Intelligence	Definition of the Contextualized Multiple Intelligence	Expected Outcomes of Education
• **Technological Person**	• **Technological Intelligence**	• It refers to the ability to think, act and manage technologically and maximize the benefits of various types of technology	• **A technologically intelligent leader and citizen** who can contribute to the technological development of the society
• **Economic Person**	• **Economic Intelligence**	• It refers to the ability to think, act and manage economically and to optimize the use of various resources	• **A economically intelligent leader and citizen** who can contribute to the economic development of the society
• **Social Person**	• **Social Intelligence**	• It refers to the ability to think, act and manage socially and to effectively develop harmonious interpersonal relationship	• **A socially intelligent leader and citizen** who can contribute to the social development of the society
• **Political Person**	• **Political Intelligence**	• It refers to the ability to think, act and manage	• **A politically intelligent leader**

		politically and to enhance win-win outcomes in situations of competing resources and interests	**and citizen** who can contribute to the political development of the society
• **Cultural Person**	• **Cultural Intelligence**	• It refers to the ability to think, act, and manage culturally, to optimize the use of multi-cultural assets and to create new values	• **A culturally intelligent leader and citizen** who can contribute to the cultural development of the society
• **Learning Person**	• **Learning Intelligence**	• It refers to the ability to learn and think creatively and critically and to optimize the use of biological/ physiological abilities	• **A continuously earning leader and citizen** who can contribute to the learning development of the society
• **Contextualized Multiple People**	• **Contextualized Multiple Intelligences (CMI)**	• It refers to the comprehensive ability including technological, economic, social, political, cultural and learning intelligences as well as intelligence transfer and creation	• **A CMI leader and citizen** who can creatively contribute to the technological, economic, social, political, cultural and learning developments of the society

Traditionally, education in many parts of the world emphasizes on development of specialists with focus only on one or two types of intelligence such as technological intelligence, economic intelligence or social intelligence, but ignoring the other. It is

often assumed that most education graduates will have only one to three careers in the same area during their whole life such that other types of intelligences or knowledge may not be necessary and relevant to their future development. This kind of thinking sets a very tight limit to the development of graduates in such a fast changing environment involving huge transformations in economy, manpower structure and social infra-structure. We can expect that frequent change in career tends to be necessary in the future life of our new generations. Therefore, the traditional education with focus narrowly on one to two types of intelligence will not meet the challenges and needs of the future anymore.

In the new century, graduates from education should not be limited to be technicians or expects in certain areas but also be intelligent leaders and citizens for development of the society in different areas. They will be technologically intelligent citizens, economically intelligent citizens, socially intelligent citizens, politically intelligent citizens, culturally intelligent citizens or continuously learning citizens. In other words, they have not only professional skills and knowledge but also higher-level intelligence and creativity for further development and innovation. Particularly, they have the potential to become contextualized multiple intelligent citizens to creatively and wisely lead the development of the whole society or the global village in facing up challenges in the new century. How can we develop such CMI leaders and citizens from education? It is really a crucial question we will explore in this paper.

Pentagon Theory of CMI in Education

Based on the above contextualized multiple intelligences, a Pentagon Theory of CMIs development proposed by Cheng (2000) can be used to reconceptualize education, as depicted in Figure 1 - as follows:

1. **Development of CMI.** The development of students' contextualized multiple intelligences is the core condition for developing a new generation of leaders and citizens for the future of a society in the technological, economical, social, political, cultural and learning aspects. Therefore, education should be reformed with clear relevance and concrete linkages with the development of CMI.

2. **Encouraging CMI Interactions**: The relationships among these six CMI are interactive and mutually reinforcing with the Learning Intelligence at the central as shown by a pentagon as in Figure 1. The design of education should encourage and facilitate such interactions and reinforcements among CMI if we want to have citizens with a broad mind sets or multiple intelligences to deal with the diverse challenges in the new era.

3. **Facilitating Intelligence Transfer & Creativity:** Intelligence transfer from one type to other types (e.g., from economic intelligence to political intelligence or social intelligence) should be encouraged and facilitated to achieve a higher level of intelligence or meta-thinking in one area or other. The transfer itself can represent a

type of intellectual creativity and generalization. The more the students can transfer their intelligence from one type to other, the more creative they will be no matter in the original area or other areas. To a great extent, intelligence transfer represents the potential of creativity that is the crucial asset in the emerging knowledge-driven economy. If students can have achieved contextualized multiple intelligences, they have higher potential to make intelligence transfer from one type to other type, than those strong only in one type of intelligence. It means that they have a higher potential of creativity. Therefore, education should encourage achievement of CMI as well as intelligence transfer and creativity. This will be very important to the development of innovative knowledge-based economy and the creation of a high level thinking society and an intelligent global village.

4. **Taking Learning Intelligence at the Central**. To accelerate the development of all other CMI, the development of Learning Intelligence can play a central role (Figure 1). Instead of teaching and learning huge volume of information and factual materials, the content of education should put emphasis on developing students' ability to persistently learn how to learn systematically, creatively, and critically. This may partly reflect why the current educational reforms in different parts of the world emphasize the ability and attitude to life-long learning (Education Commission, 1999; Townsend & Cheng, 1999).

Figure 1:

Pentagon Theory of CMI development
For Education
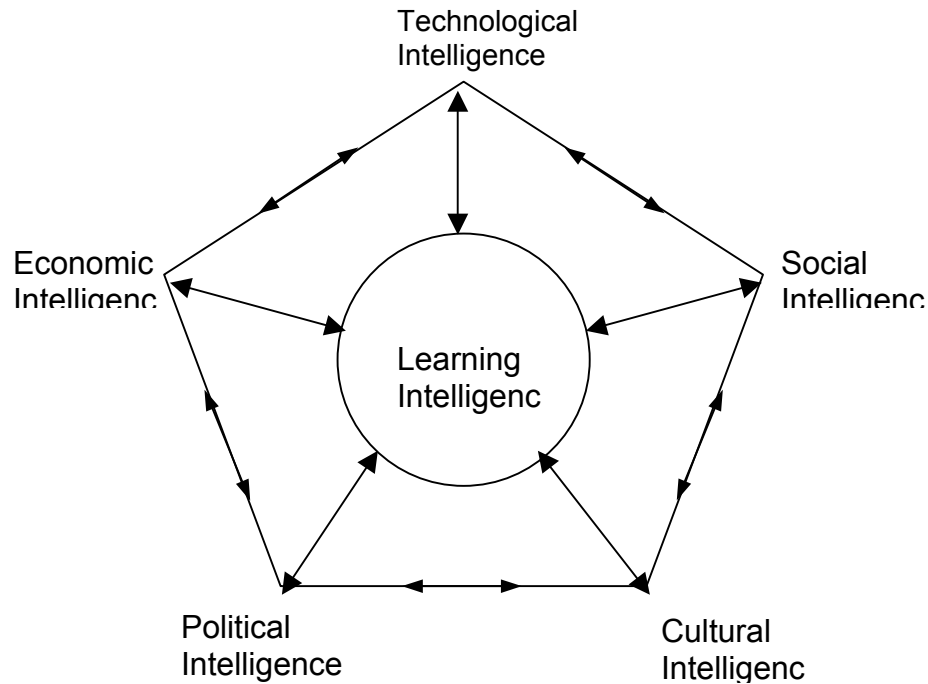
5. **Globalization, Localization, and Individualization of Education:** In order to maximize the opportunities for development of CMI for students, globalization, localization, and individualization in teaching and learning are important and necessary. The following paragraphs will highlight their conceptions and implications for education reforms.

Triplization in Education

Rapid globalization is the one of the most salient aspects of the new millennium particularly since the fast development of information technology in the last two decades

(Brown, 1999). To different observers, different types of globalization can be identified even though most of the attention is in the areas of economy, technology, and culture (Brown & Lauder, 1996; Waters, 1995). According to Cheng (2000), there should be multiple globalization, including *Technological Globalization, Economic Globalization, Social Globalization, Political Globalization, Cultural Globalization, and Learning Globalization* in the new millennium (Figure 2).

Inevitably, how education should be responsive to the trends and challenges of globalization has become a major concern in policy making in these years (Ayyar, 1996; Brown & Lauder, 1996; Fowler, 1994; Green, 1999; Henry, Lingard, Rizvi, & Taylor, 1999; Jones, 1999; Little, 1996; McGinn, 1996; Pratt & Poole, 2000; Curriculum Development Council, 1999). Cheng (2000) argued that not only globalization but also localization and individualization are necessary in ongoing educational reforms. All of these processes as a whole can be taken as a *Triplization Process* (i.e., triple + izations) that can be used to discuss educational reforms and formulate the new pedagogic methods and environment to implement new curriculum for enhancing CMI of students. The implications of globalization, localization, and individualization are summarized as shown in Table 4 and Figure 2.

Globalization: It refers to the transfer, adaptation, and development of values, knowledge, technology, and behavioral norms across countries and societies in different parts of the world. The typical phenomena and characteristics associated with globalization include growth of global networking (e.g. internet, world wide e-communication, and transportation), global transfer and interflow in technological,

economic, social, political, cultural, and learning aspects, international alliances and competitions, international collaboration and exchange, global village, multi-cultural integration, and use of international standards and benchmarks. Implications of globalization for education should include maximizing the education relevance to global development and pooling up the best intellectual resources, support and initiatives from different parts of the world for learning, teaching and research (Daun, 1997; Holmes, 1999).

Some ongoing examples and common evidences of globalization in educationare web-based learning; use of the Internet in learning and research; international visit/immersion programs; international exchange programs; international partnership in teaching and learning at the group, class, and individual levels; interactions and sharing through video-conferencing across countries, communities, institutions, and individuals (Holmes, 1999; Jung & Rha, 2001; Van Dusen, 1997; Lick, 1999; Klor de Alva, 2000). Many such examples of initiatives can be found in Hong Kong, Europe, Australia and USA. Further, the development of new curriculum content on technological, economic, social, political, cultural, and learning globalization is also important and necessary in new education.

Figure 2:

Globalization, Localization, and Individualization

Technological Globalization

Localization

Learning Globali-zation

Individualization

Social Globali-zation

EI

LI

SI

Political Globali-zation

PI

C I

Cultural Globali-zation

Economic Globalization
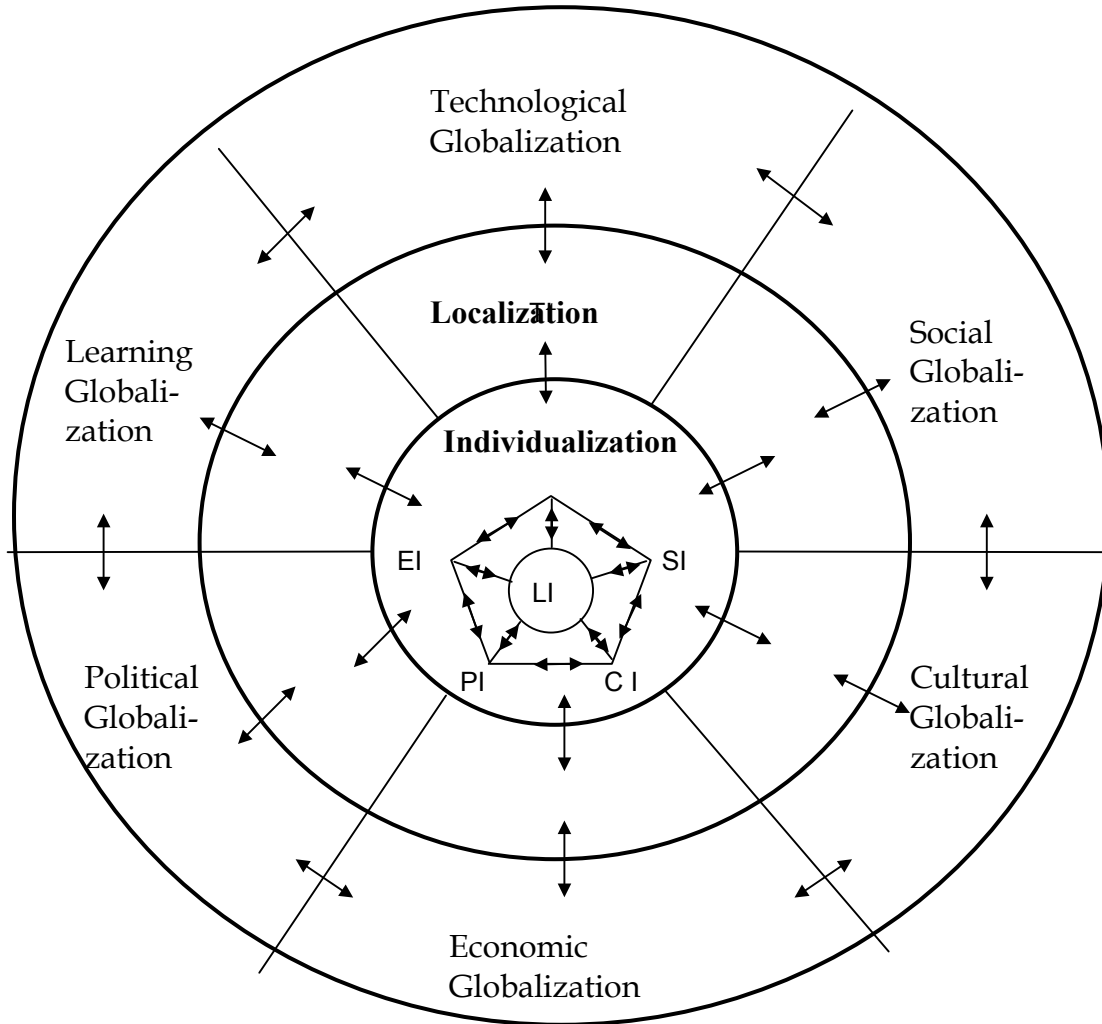
Table 4: Implications of Triplization for Education

Triplization	*Conceptions and Characteristics*	Implications for Education
Globalization	Transfer, adaptation, and development of values, knowledge, technology and behavioral norms across countries and societies in different parts of the world: • Global Networking • Technological, Economic, Social, Political, Cultural, and Learning Globalization • Global Growth of Internet • International Alliances and Competitions • International Collaboration & Exchange • Global Village • Multi-cultural Integration • International Standards and Benchmarks	To maximize the education relevance to global development and pool up best intellectual resources, support, and initiatives from different parts of the world for learning, teaching and research: e.g. • Web-based Learning • International Visit/Immersion Program • International Exchange Program • Learning from Internet • International Partnership in Teaching and Learning at group, class, and individual levels • Interactions and Sharing through Video-Conferencing across Countries, Communities, Institutions, and Individuals • Curriculum Content on Technological, Economic, Social, Political, Cultural, and Learning Globalization
Localization	Transfer, adaptation, and development of related values, knowledge, technology, and behavioral norms from/to the local	To maximize the education relevance to local developments and bring in community support and resources, local partnership, and collaboration in

	contexts:	learning, teaching and research: e.g.
	• Local Networking • Technological, Economic, Social, Political, Cultural, and Learning Localization • Decentralization to the Local Site Level • Indigenous Culture • Community Needs and Expectations • Local Involvement, Collaboration and Support • Local Relevance and Legitimacy • Community-based Needs and Characteristics • Social Norms and Ethos	• Community Involvement • Public- Institutional Collaboration • Institutional-based Management &Accountability/ School-based Management • Inter-institutional Collaboration • Community-related Curriculum • Curriculum Content on Technological, Economic, Social, Political, Cultural, and Learning Localization
Individualization	Transfer, adaptation, and development of related external values, knowledge, technology, and behavioral norms to meet the individual needs and characteristics: • Individualized Services • Development of Human Potential in Technological, Economic, Social, Political, Cultural and Learning Aspects • Human Initiative and Creativity • Self-actualization	To maximize motivation, human initiative, and creativity in learning, teaching and research**: e.g.** • Individualized Educational Programs • Individualized Learning Targets, Methods, and Progress Schedules • Self Life-long Learning, Self Actualizing, and Self Initiative • Self Managing Students and Teachers • Meeting Special Needs

	• Self-managing and Self-governing • Special Needs	• Development of Contextualized Multiple Intelligences

Localization: It refers to the transfer, adaptation, and development of related values, knowledge, technology, and behavioral norms from/to the local contexts. Some characteristics and examples of localization are as follows: local networking; adaptation of external technological, economic, social, political, cultural, and learning initiatives to local communities; decentralization to the community or site level; development of indigenous culture; meeting community needs and expectations; local involvement, inter-institutional collaboration, and community support; local relevance and legitimacy; and concern for community-based needs and characteristics and social norms and ethos (Kim, 1999).

The implications of localization to education reform are to maximize the education relevance to local development and bring in community support and resources, local partnership, and collaboration in learning, teaching and research. Some examples for practice of localization include community involvement in education; privatization in education; public-institutional collaboration; assurance of institutional accountability; implementation of institutional autonomy, school-based management and community-based curriculum (Wang, 2000; Altbach, 1999; James, 1994). More and more such examples can be found not only in developed countries like USA, UK and European countries but also in many developing areas in the Asia-Pacific Region (Cheng & Townsend, 2000). The development of new curriculum content related to localization in

technological, economic, social, political, cultural, and learning aspects of the society is also receiving growing attention.

Individualization: It refers to the transfer, adaptation, and development of related external values, knowledge, technology, and behavioral norms to meet the individual needs and characteristics. The importance of individualization to human development and performance is based on the concerns and theories of human motivation and needs (e.g. Maslow, 1970; Manz, 1986; Manz & Sims, 1990; Alderfer, 1972). Some examples of individualization are the provision of individualized services; emphasis of human potentials; promotion of human initiative and creativity; encouragement of self-actualization; self-managing and self-governing; and concern for special needs. The major implication of individualization in education is to maximize motivation, initiative, and creativity of students and teachers in learning, teaching, and research through such measures as implementing individualized educational programs; designing and using individualized learning targets, methods, and progress schedules; encouraging students to be self learning, self actualizing, and self initiating; meeting individual special needs; and developing students' contextualized multiple intelligences.

Students, teachers, and education institutions are "triplized" (i.e. *globalized, localized,* and *individualized) during the process of triplization*.

New Paradigm of Borderless Education

With these concepts of contextualized multiple intelligences and triplization in education, a paradigm shift of education for the new millennium can be initiated from the traditional site-bounded paradigm to the new paradigm of borderless education.

New Paradigm of Borderless Learning. In the new paradigm, learning should be borderless and characterized by individualization, localization, and globalization. (Table 5)

Individualized Learning: Student is the centre of education. Students' learning should be facilitated to meet their needs and personal characteristics, and develop their potentials particularly CMI in an optimal way. Individualized and tailor-made programs (including targets, content, methods, and schedules) for different students is necessary and feasible. Students can be self-motivated and self-learning with appropriate guidance and facilitation, and learning is a self-actualizing, discovering, experiencing, and reflecting process. Since the information and knowledge are accumulated in a unbelievable speed but outdated very quickly, it is nearly impossible to make any sense if education is mainly to deliver skills and knowledge, particularly when students can find the knowledge and information easily with the help of information technology and Internet. Therefore, the focus of learning is on learning how to learn, research, think, and create. In order to sustain learning is life long, learning should be facilitated as enjoyable and self rewarding (Mok & Cheng, 2001).

Localized and Globalized Learning: Students' learning should be facilitated in such a way such that local and global resources, support, and networks can be brought in to maximize the opportunities for their developments during learning process. Through localization and globalization, there are multiple sources of learning. Students can learn from multiple sources inside and outside their higher institutions, locally and globally, not limited to a small number of teachers in their institutions. Participation in local and international learning programs can help them achieve the related community and global outlook and experiences beyond education institutions. Now, more and more examples of such kind of programs can be found in Japan, Hong Kong, France and USA. Also their learning is a type of networked learning. They will be grouped and networked locally and internationally. Learning groups and networks will become a major driving force to sustain the learning climate and multiply the learning effects through mutual sharing and inspiring. We can expect that each student can have a group of life long partner students in different corners of the world to share their learning experiences.

It is expected that learning happens everywhere and is life-long. Education is just the preparation for a high level life-long learning and discovery (Liu, 1997; Mok & Cheng, 2001). Learning opportunities are unlimited. Students can maximize the opportunities for their learning from local and global exposures through Internet, web-based learning, video-conferencing, cross-cultural sharing, and different types of interactive and multi-media materials (Ryan, Scott, Freeman, & Patel, 2000; Education and Manpower Bureau, 1998). Students can learn from world-class teachers, experts,

peers, and learning materials from different parts of the world. In other words, their learning can be a world-class learning.

Traditional Paradigm of Site-bounded Learning. In the traditional thinking, students' learning is part of the reproduction and perpetuation process of the existing knowledge and manpower structure to sustain developments of the society, particularly in the social and economic aspects (Cheng, Ng & Mok, in press; Blackledge & Hunt, 1985; Hinchliffe, 1987; McMahon, 1987). Education is perceived as a process for students and their learning being "reproduced" to meet the needs of manpower structure in the society. The profiles of student and learning are clearly different from those in the new paradigm (see Table 5).

Reproduced Learning: In education, students are the followers of their teachers. They go through standard programs of education, in which students are taught in the same way and same pace even though their ability may be different. Individualized programs seem to be unfeasible. The learning process is characterized by absorbing certain types of knowledge: students are "students" of their teachers, and they absorb knowledge from their teachers. Learning is a disciplinary, receiving, and socializing process such that close supervision and control on the learning process is necessary. The focus of learning is on how to gain some professional or academic knowledge and skills. Learning is often perceived as hard working to achieve external rewards and avoid punishment.

Site-Bounded Learning: In the traditional paradigm, all learning activities are institution-bounded and teacher-based. Students learn from a limited numbers of institutional teachers and their prepared materials. Therefore, teachers are the major sources of knowledge and learning. Students learn the standard curriculum from their textbooks and related materials assigned by their teachers. Students are often arranged to learn in a separated way and are kept responsible for their individual learning outcomes. They have few opportunities to mutually support and learn. Their learning experiences are mainly institutional experiences alienated from the fast changing local and global communities. Learning happens only in education institution within a given time frame. Graduation tends to be the end of students' learning.

Table 5: Towards New Paradigm of Borderless Learning

New Paradigm of Borderless Learning	*Traditional Paradigm of Site-Bounded Learning*
Individualized Learning:	**Reproduced Learning**:
• Student is the centre of education	• Student is the follower of teacher
• Individualized Programs	• Standard Programs
• Self-Learning	• Absorbing Knowledge
• Self-Actualizing Process	• Receiving Process
• Focus on How to Learn	• Focus on How to Gain
• Self Rewarding	• External Rewarding
Localized and Globalized Learning:	**Institution-Bounded Learning:**
• Multiple Sources of Learning	• Teacher-Based Learning

• Networked Learning	• Separated Learning
• Life-long and Everywhere	• Fixed Period and Within Institution
• Unlimited Opportunities	• Limited Opportunities
• World-Class Learning	• Site-Bounded Learning
• Local and International Outlook	• Mainly Institution-based Experiences

Effective Learning through Localization and Internationalization:

Self- Learning in A Networked Human and Technological Environment

According to the above new paradigm of borderless education, we should emphasize students' continuous self-learning and development of CMI with the support of localization and globalization through information technology and various types of international and local networking. Mok and Cheng (2001) has proposed a theory of self-learning in a networked human and technology environment to show how students' individualized self-learning can be motivated, sustained and optimized through the wide local and international support from the borderless and networked human and technological environment. The key concepts are summarized as follows:

Self-learning Cycle

The understanding of the nature of self-learning is important in implementing new paradigm of borderless learning. Based on the concepts of action learning (Yuen & Cheng, 1997, 2000; Argyris & Schön, 1974; Argyris, Putnam, & Smith, 1985), Mok and Cheng (2001) conceptualised the process of self-learning as a cyclic process in a networked human and IT environment as shown in Figure 3. It subdivides a learning episode into a sequence of three components such as mental condition (mind-set), action,

and outcome, linked by four processes including planning, monitoring, feedback to mental condition and feedback to action. There are two types of feedback from the monitoring process and outcomes to the learner: One to the mind-set and the other one directly to action. The feedback to mind-set will help the learner to reflect on and change his/her own mental models including meta-cognition, thinking methods, meta-volition, and knowledge and then to change the planning process as well as the action of learning. The learning associated with change in mental-set or mental models is often referred as *the second order learning or double-loop learning*.

The feedback directly to action of learning will help the learner to adapt his/her learning behaviors. The learning associated with change in behaviors or actions is often referred to as *the first order of learning or the single loop learning*. Since this type of learning has not changed the mental conditions of the learner, it may not produce long lasting learning effects at a higher level.

How to sustain the cyclic process of self-learning by the learners themselves continuously and throughout their life span is really the core issue of current education reforms. According to the literature of learning environment, both human environment and technological environment are important to facilitating and sustaining self-learning (Garrison, 1997; Henderson & Cunningham, 1994). Particularly, how the human and IT environment can be designed, developed and used to facilitate such a continuous lifelong self-learning inevitably becomes an important question to guide the development of self-learning theory for a context of networked human and IT environment. Mok and Cheng

(2001) has explained a theory of self-learning in a networked human and IT environment, that can be used to support the new paradigm of borderless education, as follows.

Networked Local and International Human & IT Environment

The Learning Cycle

1. Mind-set

2. Plan

3. Action

4. Monitor

5. Outcome

6. Feedback

7. Feedback

Networked Local and International Human & IT Environment
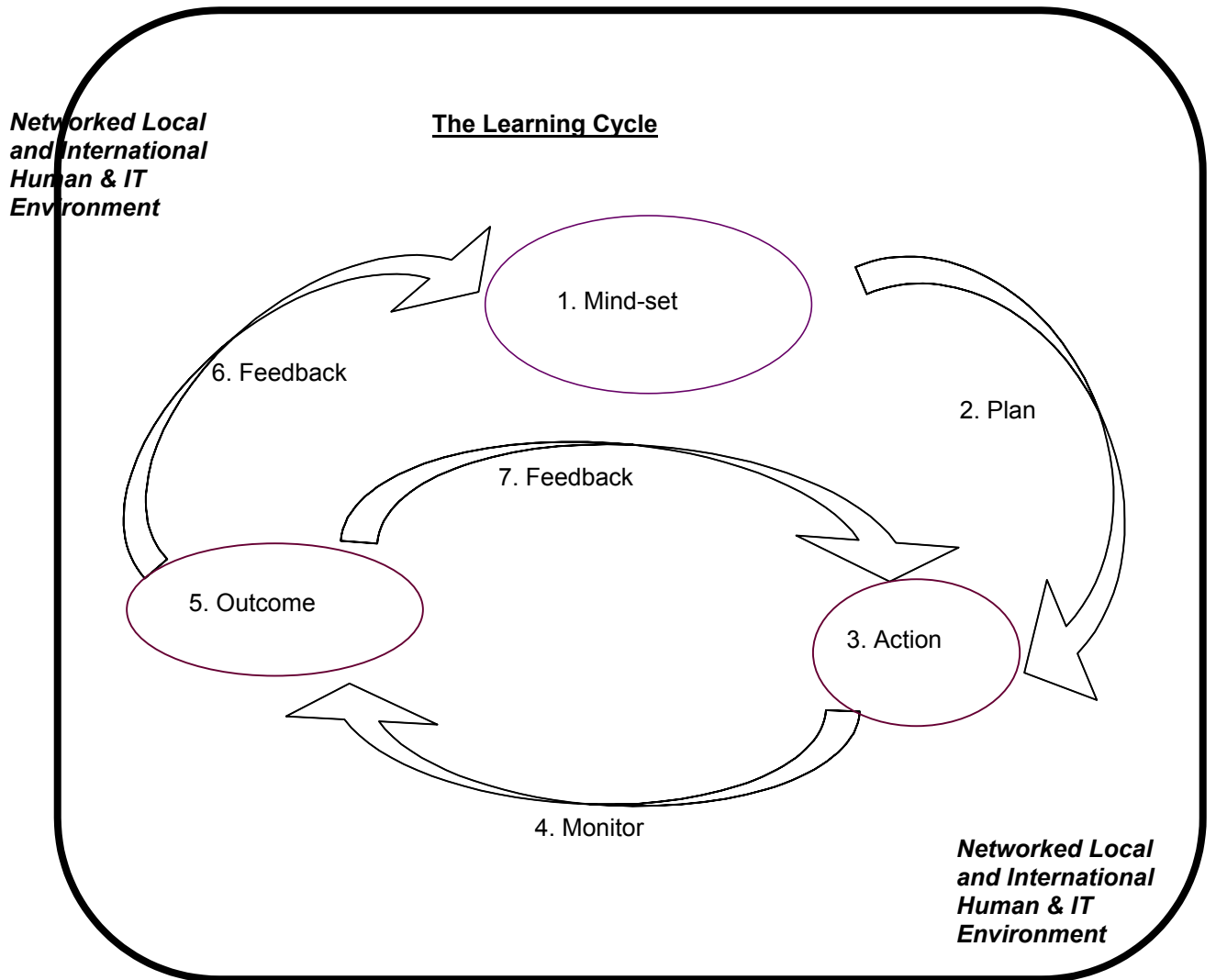
Figure 3. A Self-learning Cycle in a Networked Borderless Human and IT environment

IT Environment

Due to the tremendous developments in IT, internet, and global networking, recently there has been a great demand for developing an IT environment in order to support paradigm shift in learning and teaching. Computer technology makes it possible for multiple learners to be networked and participate in the learning task, thus greatly enhancing the social interactions, sharing of learning experiences and resources in a very convenient way. Information technology can also facilitate and accelerate the monitoring, assessment, and feedback processes in a very fast and efficient way (Embretson & Hershberger, 1999).

There may be four important aspects in which new technology can contribute to the development of a powerful IT environment that can facilitate the self-learning cycle:

1. Computer technology revolutionalized both the speed and access to information (Hallinger, 1998). Information is interpreted in its broadest sense, including resource materials for the learner as well as feedback concerning how well the learner has learned. With the help of the Internet, learners can access the best quality of web-based learning materials in different parts of the world. Further, because of the high speed of information technology, feedback can be immediately generated for each step of learning tasks and activities as well as for the overall proficiency of learning. The fast feedback to learner's mental conditions and learning behaviors in fact accelerates the speed of learning, including cognitive changes and behavioral changes of the learner;

2. Developments in IT make it possible for the application of measurement theory to assessment tasks during the self-learning process. Technology is now available for real-time scoring (Herl, Baker, & Niemi, 1996), computer adaptive testing (CAT), automated data logging (Chung & Baker, 1997), and computer item construction (Bennett, 1999). The advanced assessment methods can greatly improve the quality and accuracy of monitoring and feedback such that the quality and opportunity of learning can be ensured;

3. Developments in IT enable assessment to move away from the paper-pencil format to rich imagery multimedia task presentation and submission (Bennett, 1999; Chung & Baker, 1997) that can capture richly contextualized performance in the learning process (Bennett, 1999). For example, Chung and Baker (1997) described the scoring of complex concept maps constructed by students, based on information that stored in Web-pages. They were able not only to measure the quality of the finished product, but also to capture, unobtrusively, the process of how students learned. Students' process of learning were monitored, using Web page access log, including information students considered important to the task, the amount of time searching the Web for relevant information, time students spent on each Web page, modification to the concept map under construction, etc. All this information would be powerful to understand the complex nature of learning process and in turn improve learning strategies, activities, and outcomes; and

4. IT environment breaks down distance barriers of access to education and creates connectivity amongst learners (Mok & Cheng, 2000a). When learners, teachers, parents, resource people, and other related experts can be networked through IT,

more opportunities will be available for social interactions, experience sharing, and information flow. With this, a networked human environment can be created to sustain and support self-learning of individual learners.

Networked Human Environment

The meaningfulness of learning is often constructed within a human environment that comprises the teacher, peers, parents and other adults and also reflects to a certain extent the education values espoused by the social actors (Garrison, 1997). The human environment plays a significant role in all aspects: pedagogical, psychological and behavioural of self-learning (Schunk, 1998). In particular, Zimmerman (2000) highlighted the interdependent role of social, environmental and self and their bi-directional influences in self-learning.

In education reforms, the human environment itself can be designed to become an important source of pedagogical information. The teacher, as a key actor in the human environment of learning, helps the learner to develop attitudes and skills for goal-setting, self-management, self-monitoring, and self-evaluation which are essential to the success of self-learning. For example, in this IT age, there is no short of information, but the learner needs to make judgment about the information. Consequently, the learner has to develop critical thinking skills to validate and authenticate the quality of instructional materials, such as those downloadable from the web. Further, the teacher as a proficient adult provides appropriate learning references or guides the learner to these materials.

Winne and Perry (2000) identified the unique position held by teachers in judging the quality of the student's self-learning and providing guidance where appropriate. The learner also learns from peers, parents and other adults by observation and emulation (Schunk, 1987; as cited in Schunk, 1998).

Self-learning is a complex process and the endeavour can result in non-accomplishment, frustration or even failure. In such instances, the empathy and social support from the teacher, parents and peers acts as an emotional safety net for the learner. A strong social climate gives strength to the learner to continue engagement in the task, analyse strategies and manage the failure and frustration in a positive way.

It is now possible, with development in IT, to network the learner with the teacher, parents, peers and other adults or professionals in the community such that influence of the human environment on self-learning can be maximised (Mok & Cheng, 2000a).

When individual learners are networked with the support of IT, as shown in figures 4 and 5, there may be multiplying effect on the amount of available information as well as human touches and interactions that will become fruitful stimulus to students' self-learning. The networked individual learners, teachers, parents and other professionals may form a learning system to support students' continuous self-learning. In a learning society, each learner is self-motivated and generates a learning cycle of self-learning and self-evaluation. Learners, teachers and parents are networked to form a learning classroom; classrooms are networked to form a learning school; schools and the

community are networked to form a learning society; learning societies are networked across nations (Mok & Cheng, 2000b). IT speeds up the process of providing social messages and informative feedback to the learners and members in the learning system. This speed, coupled with the massive amount of information available via the informative network, not only means that this will be the information-rich era, but also, it implies that a closely networked social environment needs to be in place for promoting and supporting self-learning of individual learners. Self-learning is no longer the acquisition of information of individual learners in an isolated context. Instead, effective self-learning occurs in the human environment that can facilitate higher level of intelligence and motivation of learners as well as other members in the human network in the selection, management, transfer, creation and extension of knowledge (Mok & Cheng, 2000a).

Facilitating Self-learning Cycle

Building up a strong and direct linkage between each stage of self-learning cycle and networked learning environment should be an important issue in education reforms and in daily educational practice. From the aforementioned nature of learning cycle and networked human and IT environment, we may consider how each stage of the self-learning cycle can be initiated and sustained continuously to achieve effective learning with the support of a networked human and IT environment. For the detail, please see Mok and Cheng (2001).
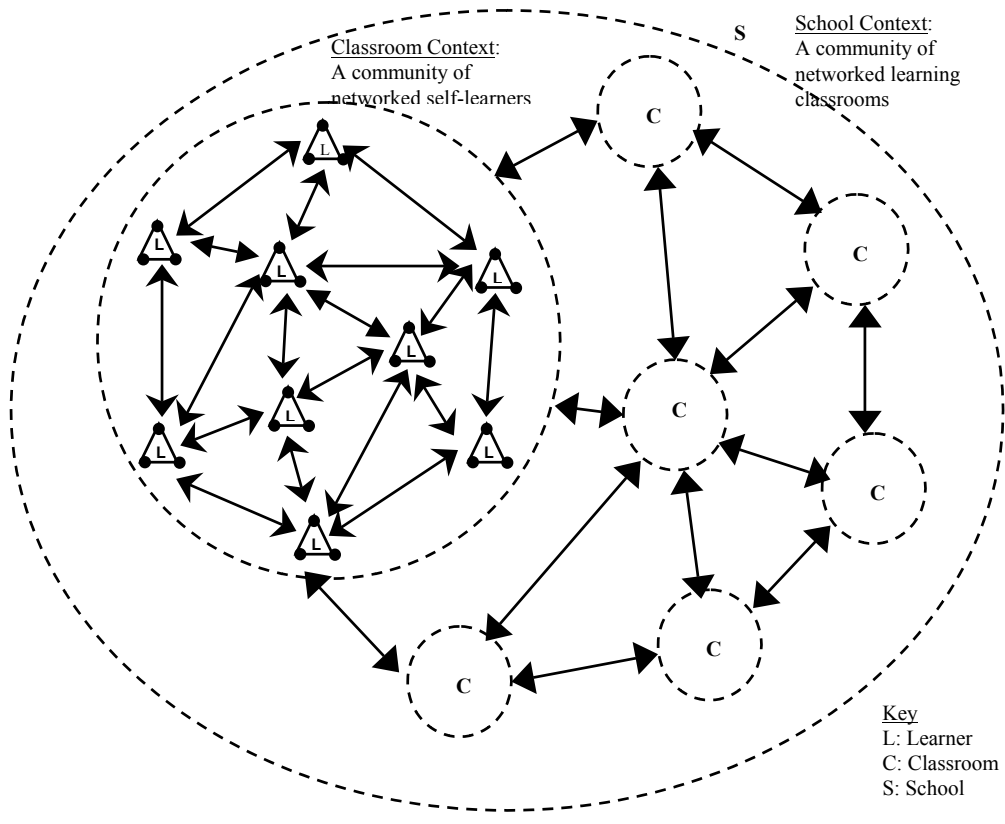
Figure 4. Networked human environment: Networked school comprising linked self-learners and classrooms.
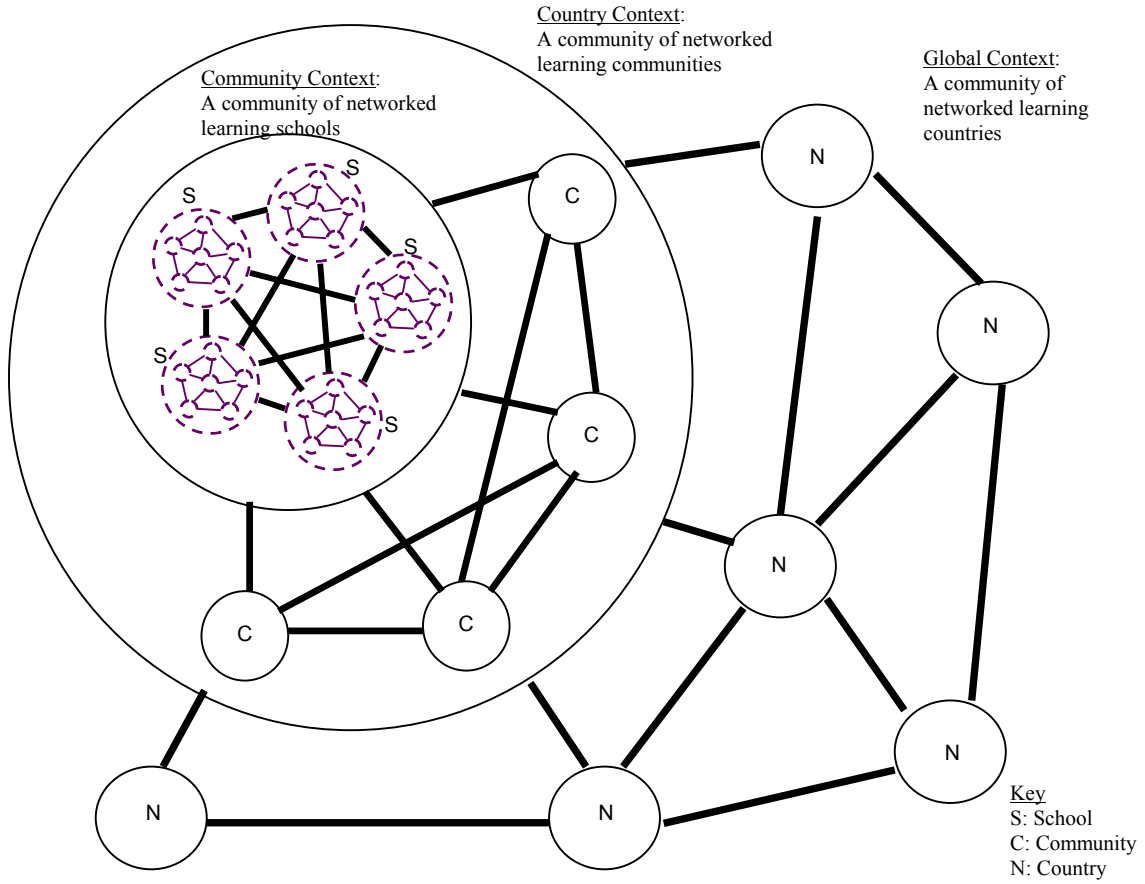
Figure 5. Networked human environment: Networked global context comprising linked learning countries and communities.

School-based Platform and Central Platform for Borderless Education: Platform Theory

How to build up such a networked human and technological environment for borderless education is very challenging to both educators and reformers. According to Cheng (2002, 2001a,b), the development of a networked human and technology environment can be supported by the school-based platform and central platform.

Platform is a new powerful concept in conceptualizing and organizing various types of existing resources, technology, knowledge, and even social and cultural capital from local and global sources to form an intelligence-intensive and technology-intensive platform or supporting environment, that can enable and facilitate people to work and perform in a smart and optimal way. Unlike the traditional concept of organizational structure with focus on control and coordination, platform is mainly for supporting people with the necessary knowledge, technology and social environment such that they can have the maximum opportunity to develop themselves and perform at their highest potential in their work.

School-based management or educational decentralization should aim at developing as a ***school-based platform*** that can accumulate, organize and apply the necessary knowledge and technology, useful experiences, networks, various types of internal and external resources, and social support to support educational practice and innovation for effective teaching and learning, facilitate organizational learning, and develop a culture

of professionalism within a school. To a great extent, a good school-based platform is a powerful way to pool resources for effective learning through localization and globalization. For the detail of how school-based management can be developed such a platform or mechanism for continuous development and effectiveness, please refer to Cheng (1996).

At the system or regional level, a *central education platform* should be formed with the support of information technology and various types of local and global networking. This central platform aims to pool up the most powerful and relevant knowledge, expertise and resources from local and global sources to create a more knowledge-intensive, technology-intensive and intelligence-intensive central base for supporting the development of all types of school-based platform and related initiatives. On this central platform, schools, teachers, and students can work on a higher level of knowledge to develop their school-based initiatives and avoid unnecessary wastage of time, resources and efforts due to repeated "re-inventing a wheel" or "start from scratch". This central platform is also a huge network or learning community for sharing the advanced knowledge, best practices and experiences of success and failure among schools, educators and experts (Mok &Cheng, 2001).

Figure 6:
Platform Theory for Effective Learning, Teaching and Schooling
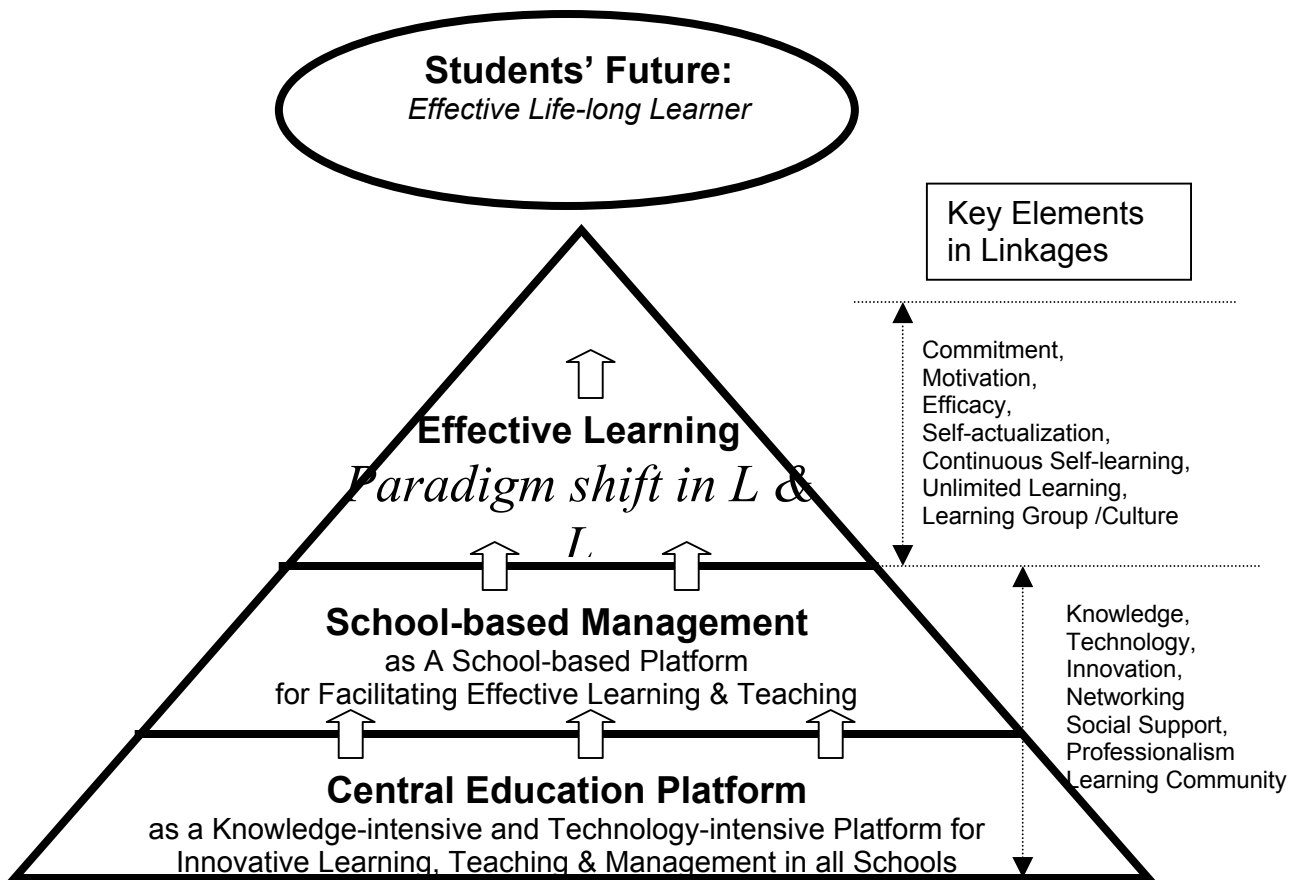
The key elements of the school-based platform and central education platform are accumulation, dissemination, and application of knowledge and technology to promote various types of innovation, networking and social support and develop a culture of professionalism and learning community in education, that can support paradigm shift in education and effective learning, teaching and schooling.

As shown in Figure 6, with the support of the school-based platform as well as the central platform, the key elements in effective learning and teaching are students and

teachers' commitment, motivation and efficacy to promote and achieve learning as continuous self-actualization and self-learning and create unlimited opportunity for learning, developing learning groups, and evolving learning culture among students and teachers (Cheng, 2001a,b; Mok & Cheng, 2001).

Implications for Changing Teachers' Role and Teaching Style

The paradigm shift in learning inevitably requires corresponding paradigm shift in teaching and teachers' role. The major changes can be summarized as shown in Table 6.

New Paradigm of Teaching

In the new triplization paradigm, teachers' teaching should be triplized: individualized, localized, and globalized.

Teachers and their teaching are facilitated in a way such that their potentials can be maximized to facilitate students' learning in an optimal way. Teaching is considered a process to initiate, facilitate, and sustain students' self-learning, self-exploration and self actualization; therefore, teachers or teachers should play a role as a facilitator or mentor who support students' learning. The focus of teaching is to arouse students' curiosity and motivation to think, act, and learn. Also, teaching is to share with students the joy of the learning process and outcomes. To teachers themselves, teaching is also a life long learning process involving continuous discovery, experimenting, self actualization, reflection, and professional development. Teachers are CMI teachers who can set a

model for students in developing their multiple intelligences. Each teacher has his/her own potential and characteristics, and different teachers can teach in different styles to maximize their own contributions.

Local and global resources, supports and networks can be brought in to maximize the opportunities for teachers' developments in teaching and research and for their contribution to students' learning. Through localization and globalization, there are multiple sources of teaching, for example, self learning programs and packages, web-based learning, outside experts, and community experiental programs, inside and outside their institutions, locally and globally. Teachers can maximize the opportunities to enhance effectiveness of their teaching from local and global networking and exposure through Internet, web-based teaching, video-conferencing, cross-cultural sharing, and different types of interactive and multi-media materials (Holmes, 1999; Ryan, Scott, Freeman, & Patel, 2000; Education and Manpower Bureau, 1998). With their help, students can learn from the world-class materials, experts, peers, and teachers in different parts of the world such that teaching can become world-class teaching. Through participation in local and international development and research programs, teachers can achieve global and regional outlook and experiences beyond institutions.

Furthermore, their teaching is a type of networked teaching. Teachers are grouped and networked locally and globally to develop and sustain a new professional culture and multiply their teaching effects through mutual sharing and inspiring. They become world class and networked teachers through localization and globalization. It is not a surprise that each teacher can have a group of life long partner teachers in other

parts of the world to continuously share and discuss their experiences and ideas of professional practice and research.

Table 5: Paradigm Shift in Teaching

New CMI-Triplization Paradigm	*Traditional Site-Bounded Paradigm*
Individualized Teaching	**Reproduced Teaching**
• Teacher is the facilitator or mentor to support students' learning • Multiple Intelligence Teacher • Individualized Teaching Style • Arousing Curiosity • Facilitating Process • Sharing Joy • As Life-long Learning	• Teacher is the centre of education • Partially Competent Teacher • Standard Teaching Style • Transferring Knowledge • Delivery Process • Achieving Standard • As a Practice of Previous Knowledge
Localized and Globalized Teaching:	***Site-bounded Teaching:***
• Multiple Sources of Teaching • Networked Teaching • World-Class Teaching • Unlimited Opportunities • Local and International Outlook • As World-Class and Networked Teacher	• Site-Bounded in Teaching • Separated Teaching • Bounded Teaching • Limited Opportunities • Mainly Institutional Experiences • As Site-bounded and Separated Teacher

Changing Role of Teacher in the New Paradigm

Different roles teachers play in the teaching process may shape the roles and qualities of students in the learning process that can vary from the very passive way to the active self-learning and self-actualization mode as shown in Table 6 and Figure 7 (Weaver, 1970; Cheng, 2001a).

Table 6: Teachers' Roles and Corresponding Students' Roles and Outcomes

Teacher's Role	Teaching/ Learning Process	Student's Role	Likely Student Quality as Outcome
1. **Appreciator**	As determined by students	1. **Searcher**	Self-Determination
2. **Partner**	Participation	2. **Partner**	Responsibility
3. **Patron**	Making	3. **Designer**	Creativeness
4. **Guide**	Searching	4. **Explorer**	Adventurousness
5. **Questioner**	Experimentation	5. **Searcher**	Investigation Skill
6. **Tutor**	Reflection	6. **Thinker**	Understanding
7. **Counsellor**	Expression of feeling	7. **Client**	Insight
8. **Moulder**	Conditioning	8. **Subject**	Habits
9. **Instructor**	Transfer of information	9. **Memorizer**	Possession of information

10. Exemplar	Imitation	**10. Trainee**	Skills

Student Role

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

◄ ···

Student Self-Initiative (Self Learning)

**Student
Centered**

**Teacher
Centered**

Teacher Direct Instruction

···►

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
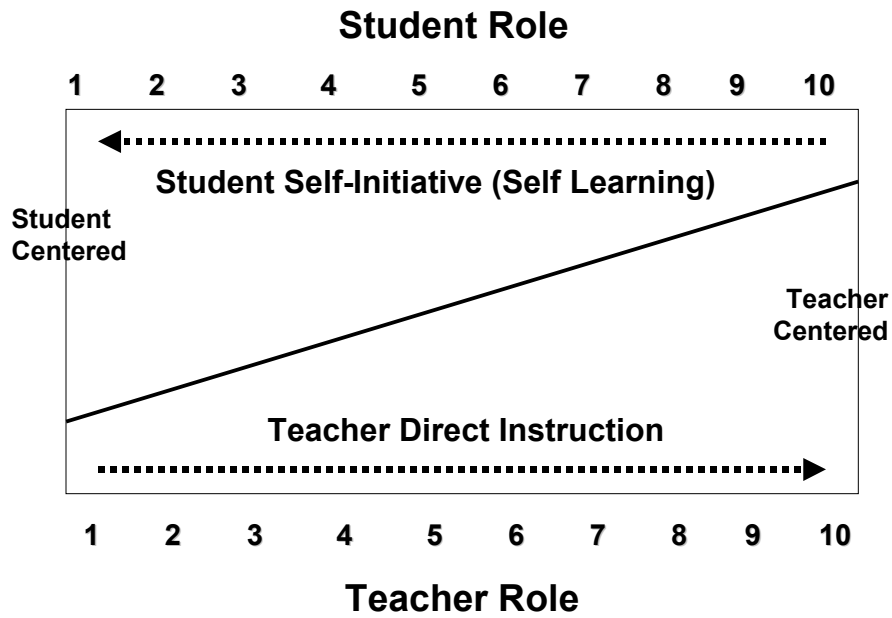
Teacher Role

Figure 7: The Ecological Relationship Between Roles of Teachers and Students

As shown in Figure 7, there is an ecological relationship between roles of teachers and students. As teachers tend to be more teacher direction instruction (towards roles 8, 9, and 10 as in Table 6), students become more passive in their learning and the qualities tend to be Habits, Possession of Information and Skills. As teachers tend to use student-centre approaching and play roles 1, 2, 3, 4, 5 and 6 in the teaching process, students have more opportunities to be active in self- learning and achieve the higher qualities of learning outcomes such as *Self-Determination, Responsibility, Creativeness, Adventurousness, Investigation Skill,* and *Understanding* that are important in the new

paradigm of borderless education and also crucial to the future of students in the new century.

We understand, the educational aims and processes are complex and the role of teacher should be dynamic and complicated including multiple roles ranging from roles 1 to 10; from total direct instruction to total student self-determination in the daily educational practices. A mix of multiple roles played by teachers in daily educational practices is often a fact of school life. What is important for teachers and educators is to keep in mind what educational aims we want to pursue. If we want to achieve a real new paradigm of education for the future of our students, we should encourage the mix of multiple teacher roles to be more student-centred and less teacher-centred in the whole teaching and learning process.

Implications for Reform of Curriculum and Instruction

As explained previously, the delivery of subject knowledge and skills is the key element in the traditional paradigm of education and teachers are the major source of knowledge. Inevitably the teacher-centered approach in education is often assumed as the efficient way to deliver subject knowledge and skills to students, and the examination of how much knowledge achieved by students is always the key criterion of effectiveness of education. Therefore, it is not a surprise that the current curriculum and instruction in many countries are characterized by "separated subject knowledge" and "teacher-centred approach" or "examination-centred approach". As shown in Figure 8, the content, scope, and effort of existing curriculum and instruction are mainly in the second quadrant (II) if we take the dichotomy of "teacher-centred/examination centred approach" vs "student-

centred approach" instruction as x-axis and the dichotomy of "subject-knowledge-based and separated curriculum" vs "multiple intelligence- based and integrative curriculum" as the y-axis to form four quadrants.
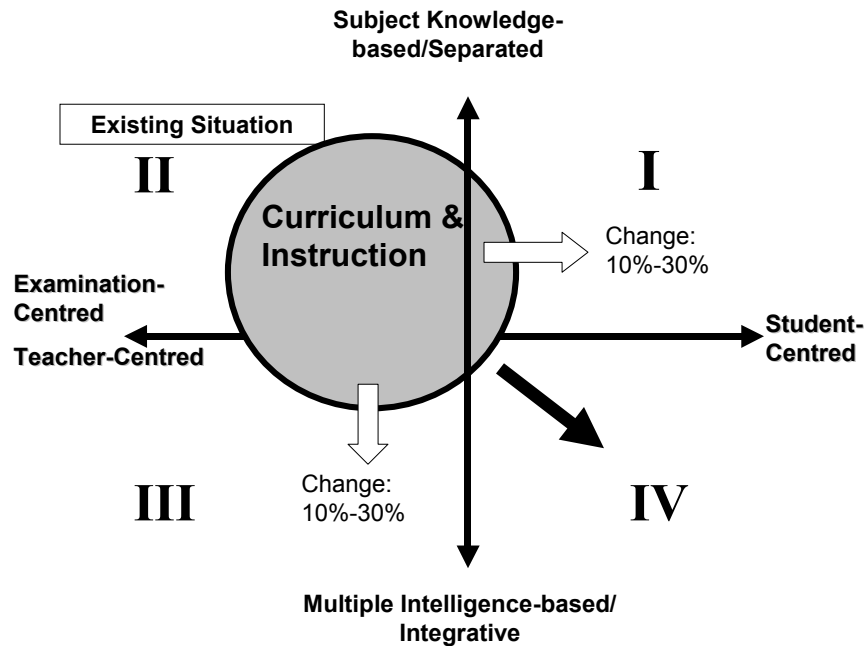
Figure 8: The Existing Situation of Curriculum and Instruction and Implications for Reforms

As illustrated in the new paradigm of borderless education, "student-centred approach" in education and " integrative multiple intelligence-based curriculum" should be strongly emphasized and promoted in order to facilitate students to pursue continuous life long self-learning and development and become contextualized multiple intelligent persons for their future. Therefore, curriculum and instruction should be changed from the traditional quadrant II towards the quadrant IV that emphasizes "student-centred approach" and "multiple intelligence-based curriculum". (see Figure 8)

Depending on the levels of education, the readiness of schools, teachers and students, the local culture and other contextual constraints, there may not need to reform radically and jump directly from quadrant II to quadrant IV. Particularly, we believe at the current stage that subject knowledge are still very important to the development of our society and individuals and teacher-centred approach and examination are still necessary to ensure delivery of certain types of knowledge and skills in some areas of education. Therefore, we can use incremental approach to implement the reform of curriculum and instruction by changing 10-30% toward the student-centred approach and the multiple intelligence-based curriculum as shown in Figure 8. After 3-5 years of reform, the new situation of curriculum and instruction may be a quite balanced way with considerate proportions in all the four quadrants (I, II, III, & IV) as shown in Figure 9. After that, the educators and reformers may consider whether it is necessary to move further towards quadrant IV.

It is clear that for different groups of students, schools, and even communities, the steps and paces of reform of curriculum and instruction may be different across these four quadrants. But, the tendency towards quadrant IV is inevitable for borderless learning in coming years in an era of globalization and information technology.
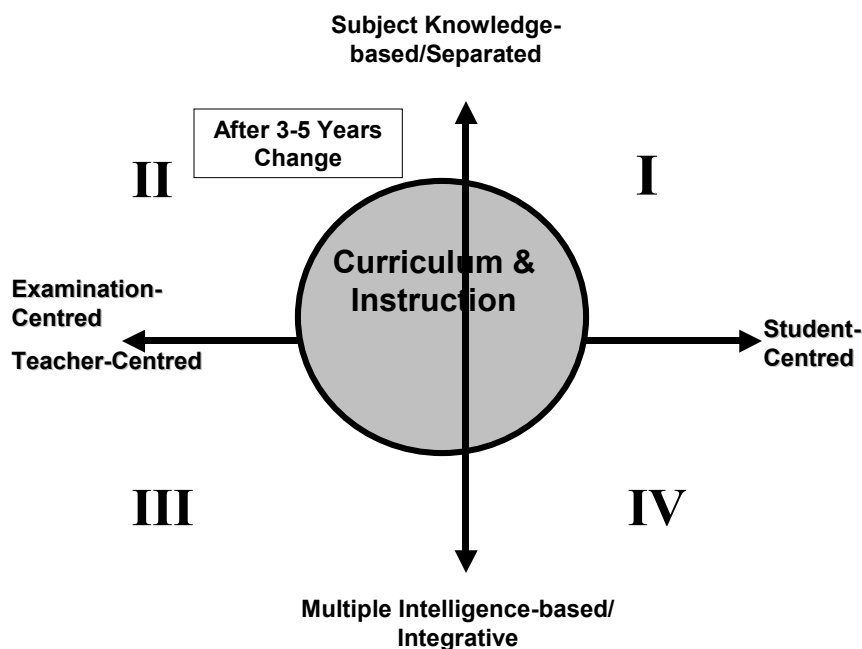
Figure 9: The New Situation After Reform of Curriculum and Instruction in 3-5 Years

Conclusion

The proposed new paradigm of borderless education that is contrastingly different from the traditional thinking, can be used to rethink and re-engineer education.

In the new millennium, our world is moving towards multiple globalizations and becoming a global village with boundless interactions among countries and areas. Our society is becoming more diverse and multiple and moving towards a learning CMI society. Our new generations should be prepared as a CMI person in such a fast changing and interacting local and global environment. The aims of education should be to develop students as CMI leaders and citizens who will creatively contribute to the formation of a

CMI society and a CMI global village with multiple developments in technological, economic, social, political, cultural, and learning aspects.

We expect, our education will be triplized in the new century. In fact, the ongoing education reforms in different parts of the world have already provided evidence that many countries are making effort in this direction through various types of initiatives in globalization, localization and individualization. We believe, our learning and teaching will be finally borderless and characterized with globalization, localization, and individualization with the help of the information technology and boundless multiple networking.

We should use a new theory to promote self-learning in a networked borderless human and technology environment. Particularly through localization and globalization, we should build up school-based platform and central platform to pool up local and global sources and intellectual assets and form a networked borderless human and technological environment to support learning and teaching. Through these platforms and the new paradigm of learning, we will create unlimited opportunities and multiple global and local sources for life-long learning and development of both students and teachers. We believe, new education should facilitate the triplized learning and make students' learning process interactive, self-actualizing, discovery, enjoyable, and self-rewarding.

We believe, teachers, as the key actors, will play a very crucial role in the whole process of triplization in education. Their roles and teaching styles will change to facilitate students' self-learning and development of CMI. Reform of curriculum and

instruction will be inevitable from "the teacher-centred approach/ examination-centred approach" and "the separated subject knowledge based curriculum" towards " the student-centred approach" and "the multiple intelligence-based curriculum".

Finally, I hope, all our students will become borderless learners with unlimited opportunities for learning and development. They will fully enjoy life-long self-learning and actualization and become CMI leaders and citizens for the new world.

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EDUCATIONAL REFORM TO MEET THE CHALLENGES OF A K-ECONOMY: THE MALAYSIAN PERSPECTIVE

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1.0   Renewed Focus on Education for a K-economy

With globalisation and the need for manpower relevant in a k-economy, the Malaysian government has embarked on the task of rejuvenating its education system. This is imperative as the economic and social development of a country and its people begins at the school level.   To build k-workers, the education system must be strong in the following:

- science and technical education

- ICT education

- quality teachers

- innovations in teaching-learning in place

- a good physical infrastructure

One cannot talk of a k-economy without reference to scientific and technological knowledge. In building up scientific and technological knowledge, education can be greatly helped by ICT, especially with regard to information access and networking. The paper will talk about all the five thrusts in education above and discuss how all these inputs in concert and in tandem can help reform the education system to a level of excellence.

The main constraint in building up the education system to a level of excellence is that, notwithstanding its pockets of affluence, Malaysia is still a developing country.

Therefore, to realise excellence in education first of all requires a good infrastructure for education. There must be adequate and adequately furnished and equipped school buildings. This is not easy to achieve, because it not only entails rebuilding, renovations and refurbishment, but even more so, a lot of building of new infrastructure for an ever-growing population.

2.0 Infrastructure Development

Infrastructure development has been happening rapidly, especially to cater for economic development needs. Drive through any part of Malaysia, and one can see building in progress, be it housing or office space, shops, roads and telephone lines and lately, light rail transport in the capital city. The government has made it mandatory for developers to build a primary and a secondary school In new housing estates. Rebuilding is on-going as old school buildings are being replaced by new blocks. If in the 1960s the government has a standard design for school buildings with the aim of building as many school buildings as possible in the shortest possible time to cope with rapid population growth, and to ensure equity and access to education, now having achieved that, the government can now focus its attention on providing quality, and this includes the quality, comfort and completeness of school buildings. Infrastructure includes facilities improvement such as renovations of science laboratories. Under the Eigth Malaysia Plan 2001 – 2005 with the aim of enhancing education, in particular science education, the government has embarked on various building projects. Firstly, new blocks are built in existing schools that also incorporate several science laboratories. Secondly, old schools are relocated or given new buildings altogether. In some cases, schools are given science laboratories only.

Infrastructure also involves general improvements and refurbishment as well as increasing the number of classrooms logical-mathematical and linguistic competence building of school facilities, such as an adequate resource centre, supply of books, etc. For example, each school is given a yearly allocation for the purchase of books to encourage reading among children and inculcate the reading habit.

Being a developing country, some remote areas are not supplied with roads, electricity supply or telephone lines. In remote areas, the government provides generators to schools and there are plans for wireless telephony.

2.0 Human Resource Development for Education Personnel

At the same time, service conditions are being improved to make teaching more attractive as a profession so as to attract the best people to teaching. For example, there is a drive to provide housing for teachers in areas where housing is scarce such as the rural areas and areas where housing is expensive, such as the big towns. These are incentives for teachers and go some way towards improving teacher deployment. Apart from this, the allocation for car loans has been increased, making it easier for teachers to get government loans to purchase cars at a low interest rate.

Teachers are given other incentives such hardship allowances and scholarships to further their studies at the masters and Ph.D level. There is also a big move to enable teachers

with diplomas and certificates to further their studies at the tertiary level. By 2005 all teachers in secondary schools will be graduate teachers. The government plans to have 50% of teachers at the primary level equipped with a university degree by 2010. There is a big drive to get teachers to enrol in distance education courses at the graduate level. The pay structure itself is being improved with the addition of incentives for certain specialised and critical personnel, such as college lecturers and Science, Mathematics and English teachers. This is to illustrate the extent of the government's concern that the education service attracts the best people.

3.0 Equity and Quality in Education and Continuing Education

Malaysia provides eleven years free education for all. At the age of fifteen, after the lower secondary examination, those not academically inclined are channelled into the vocational stream. Entrance requirements for tertiary level institutions are made more flexible to give more opportunities for those who may not have qualified the first time round. The premise operating is that workers in a k-economy must have skills in a profession or an industry. As such, technical and trades education are being revitalised.

At present, there are 10 Polytechnics in Malaysia and 2 City Polytechnics with 49,612 students. Twelve Community Colleges have just been built this year with an enrolment of 1,149 students. The concept of Community colleges has taken root. These offer vocational education for school leavers and others to gain certification and skills for

employment especially those who are not able to gain places in other institutions of higher education. Courses are offered full-time or part-time. This move is to ensure that Malaysian workers are skilled and trained in a vocation. 6,300 youths will be trained in electrical and mechanical engineering, computer-aided design and production, plastic technology and automotive mechanics under the Eigth Malaysia Plan. Web-based delivery of distance education will be developed with the aim of providing life-long learning for the society at large.

The school-going population of Malaysia enjoys 11 years continuing education. As the subject offerings are mainly academic by tradition, to cater for those not academically inclined, the government since 2002 began to introduce vocational subjects in the academic stream beginning 2002. These include Food and Catering, Gardening Nursery, Landscape and Dressmaking, Agriculture, Fabric Printing, Signmaking, The thrust in making schooling relevant to those more practically oriented will ensure that every school leaver will leave the school system with an employable skill. These subjects also teach entrepreneurship that would assist the school leaver to set up a small business using the skills that s/he has learnt in school.

4.0   Curriculum Revision for 2003

Hand-in-hand with infrastructure development is improvement in the quality of education being delivered. In 2003 a new curriculum will be implemented that will meet the needs

of the 21st century better.   The new curriculum emphasises knowledge acquisition, particularly in the scientific and technological fields, and emphasises the development of generic skills that can promote the acquisition of new knowledge throughout life. Thinking skills is given particular importance as the future is deemed to be unpredictable, hence students must be equipped with skills of thinking analytically and creatively to solve problems that they may not have encountered before. Since knowledge of science and technology, especially current research, is in English, and the fact that English is an international language, the government in May 2002 embarked on a project to teach science and mathematics in English. This is indeed a bold step for the country that has fought long and hard to establish Malay as the national language of the country. However, it was felt to be a good policy move, in the interest of building a k-economy, chiefly for the use of English as a tool for learning and for acquiring knowledge.

5.0 ICT as a Tool and an Enabler in Education

Apart from basic building infrastructure, infrastructure development for schools includes the installation of ICT facilities to all schools in Malaysia. Malaysia has 7,404 primary schools and 1,794 secondary schools. Planning for the 9,198 schools is carried out in phases as follows:

2001	2,400 schools
2002	2,000 schools
2003 onwards	The rest of the schools 9,198 schools

Curently, there are about 635 schools undergoing the Computers-in-Education programme and 87 schools under the Smart Schools programme. Whereas the comprehensive computerisation programme is mainly aimed at bridging the digital divide, the smaller Computers-in-Education programme is dual-pronged, i.e. aiming at both ICT literacy and use of ICT as an enabler in teaching-learning. The smart schools programme is a total solution targetted at improving not only teaching-learning but also school management and external relations and involves an even smaller number of schools.

The development of courseware locally, i.e. indigenous content, is given great emphasis. The government has set up a Nationa IT Council (NITC) and an implementation arm of the NITC called the Strategic Thrusts Implementation Committee or STIC. One of the agendas of STIC is e-learning. E-learning is devoted to the implementation of various projects, among which are the development of indigenous content, IT literacy for teachers and the Malaysian Grid for Learning (MyGfL). The MyGfL is a mega education project, in the sense that it is planned as a one-stop shop for learning content, delivered through the web. It covers both formal learning (school) and life-long learning for the community. Once it is operational, the MyGfL will answer some of Malaysia's needs for skills upgrading among those already employed as well as provide valuable learning resources for both teachers and students alike in the school system.

Realising the need for an international network of friends in a globalised world, the Minsitry of Education actively promotes teacher and student networks using ICT. Such networks are often privately sponsored, such as the Malaysian-British School Link between four schools in Malaysia and a number of schools in Coventry, which is being sponsored by Marconi UK plc. Essentially a teachers' network, it provides an avenue for the sharing of best practice.

6.0 Science and Mathematics Education in the medium of English

In mid 2002, a decision was made by the Malaysian government to introduce the teaching of Science and Mathematics in English. Many reasons contributed to this decision, the main one being to promote the growth of a k-economy and for future communities of scientists and technologists to network in the pursuit of new knowledge and the discoveries of new technologies. English is an international language and the language of the international research community, hence its importance in Malaysia's eforts to develop a strong scientific and technological base for its industries. There is also a strong move to have 60% of students at the upper secondary and tertiary levels to be enrolled in science and science-related courses, to ensure an adequate supply of manpower relevant for a k-economy.

The move to have about 25 – 40% of subjects taught in English is a momentuous decision for Malaysia, but one that is in line with the country's overall goal of achieving a fully-developed nation status by 2020.

In the new September 2002 budget, RM5bil allocated to the teaching of Science and Mathematics from 2002 to 2008. An expenditure of RM979 million will be used to equip teachers with notebook computers, LCD projectors and related equipment.

7.0 Innovativative Approaches in Curriculum Delivery Based on Current Learning Theories

Hand-in-hand with the decision to teach Science and Mathematics in English is the drive to make learning fun, meaningful and more effective for students. With curriculum renewal comes renewed emphasis on student-centred learning and activity-based, experiential approaches. Various developments in pedadgogy are being disseminated among teachers at the orientation courses for the new, revised curriculum. Among these are contextual learning and constructivism and the idea of multiple intelligences and learning styles. The incorporation of these theories into teaching-learning is to make learning more relevant by relating it to the world the student lives in, and by making the student the starting point of the whole learning process. The use of the capabilities of ICT widens the student's classroom experience, especially for schools that are Internet

connected, which the majority of schools are. This drive towards student-centred learning is meant to revitalise the Malaysian classroom towards smart learning.

Constructivism is a brain-based approach that uses the student's existing schemata to scaffold new knowledge. Understanding how constructivism works will go a long way towards the student achieving mastery over a particular skill or concept being taught. Using the idea of constructivism when planning lessons will help foster cognitive development faster. The use of advance organisers or set induction is designed to call up the student's prior knowledge that can assist in the acquisition of new knowledge. Similarly, giving students work prior to coming to class (i.e. student's preparatory work) will enable them to latch on to new knowledge better than if they had come unprepared.

Contextualism utilises student's previous experience or student's current experience of the world to introduce knowledge in a natural way. Learning is put in terms of or in the context of the student's world using the student's world view. For example, teachers often discover that one of the best ways to reach students is through the use of their own brand of music, be it hip-hop, raggae or heavy metal. Similarly, when talking about a scientific phenomena, the best examples to illustrate a particular phenomena is through the student's world and culture. Students living in remote mountain areas for example may find examples of flora and fauna common to coastal areas slightly more difficult to relate to compared to the flora and fauna that inhabit the woodlands close to their homes.

Teachers are also informed of the theory of multiple intelligences as a way to approach students' learning. Teachers are advised to tailor classroom activities to the way students best learn. For example, getting the more kinesthetically inclined to sit through an hour of lecture may not suit them because they are more stimulated to learn in contexts where there are lots of movement and activity. The more logically and mathematically inclined may find it difficult to respond emotionally and intuitively to an artistic creation because it has less meaning for them in their carefully ordered world where everything is not explained by feelings but more by systematic calculation, verification and proof. For a long time, the Malaysian education system favours logical-mathematical and linguistic competence with the result that the potentials of the intrapersonal, interpersonal, kinesthetic and musically inclined are wasted because they fail to get good grades for those subjects that they have no inclination or gift for, since their gifts lie elsewhere. Since examinations test logical-mathematical and linguistic competence, often these variously talented people end up in minor positions such as clerks ot menial workers. Of late the government has seen the need for specialist schools. Two sports schools have been built. In time this will undoubtedly be extended to other specilaist areas as well.

8.0 Conclusion

Only time will tell. By 2020, Malaysia hopes to have made significant gains in its education system to enable it to function as a k-economy comfortably. Only by careful planning and implementation can the goal of producing k-workers for a k-economy can be realised. The planning stage is over. Now it is left to the implementers and

practitioners on the ground to realise Malaysia's dreams of producing the right kind of

manpower that can fuel a k-economy.

PROCEEDINGS   THEME 1   THEME 2   THEME 3   THEME 4

THEME 1: INTERNATIONALISATION OF CURRICULA AND PEDAGOGY

"SAILING THE CHANGING WINDS" I NFORMATION TECHNOLOGY DRIVEN CHANGE IN EDUCATION IN SRI LANKA

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ABSTRACT

This study identifies the urgent needs and issues related to the integration of 'Information Technology' (IT) into the social fabric of Sri Lanka. How to adopt IT successfully in low-income developing country is one of the most pressing current development issues. It focuses on the preparation and enabling of the population of Sri Lanka to survive in the present global environment. Specifically the need of learners, teachers and educators to embrace the culture of IT is analyzed. The paper is presented after a comprehensive review of literature in the use of IT and effective leadership skills required in merging IT to school system. The research findings reveal that the ability to use IT and IT driven change in education is not only essential, but also an urgent requirement to survive. Thus it is strongly suggested that a well-structured and timely plan be implemented to encompass the education system with a broader vision to empower Sri Lanka to sail with winds of change.

"Technology in mind of it self, is not a magic wand. Technology is not going to fix the problem associated with schooling, but, at the same time, the problems that plague our

educational system are not going to be remedied without the pressure of technology"

(Researcher, North West Regional Forum).

The National Policy of Information Technology in Sri Lanka aims to provide the state of the art knowledge on 'Information Technology' (IT) to the younger generation to face the challenges of this century. However, the major difference affecting education leaders of the 21stcentury is the transformation occurring in the nation's industrial, political, social and economic realms. Accordingly, this transformation is due to the fast-paced and globally centred information and technology revolution. All leaders positioned within this technical era must be able to use the powerful tools offered by this global revolution. This study focuses on issues and concerns in initiating revolutionary   IT in par with the transitions and the new trends of the Sri Lankan education system for its human resource development through the relevant literature.

Clarke of Sri Lanka claims, "There's still room for improvement in education, the 'Information Age' offers much to mankind, and I would like to think that we will rise to the challenges it presents. But it is vital to remember that information-in the sense of raw data-is not knowledge; that knowledge is not wisdom; and that wisdom is not foresight. But information is the first essential step to all of these" (2001, CBE, A cyber Odyssey). His vision should be utilized and integrated into the education system to cope with the global trends, demands and challenges. The present world of education is information and intensive communication, and IT professionals in education systems need to be empowered with the knowledge, skills and abilities that technology offers.

Since IT became commercial in the early 1990s, it has diffused rapidly in developed countries but generally slowly in developing countries. This leads to a widening a gap known as the "digital divide". In addition, lack of IT leads to lower productivity growth, loss of business opportunities and lower incomes. A country lags behind finds it difficult to catch up with the state-of-art IT because of this vicious cycle and the rapid progress in IT. It is beyond the reach of many micro- enterprises, agro-industries, traders, schools, health centres and governmental offices in rural areas in Asian limited income developing countries (ADB, 2000).

In Sri Lanka, a major issue is the poor condition and limited availability of physical infrastructure. Asian Development Bank (ADB) recommends financial sustainability, satisfactory equity criteria in systems and maximum use to be ensured in augmenting IT infrastructure. Other key issues faced by low- income developing countries lie in low literacy rates that block any policy and to over come the poor education of children.

Kotte (2002) highlights "a lack of cohesion, accountability and standardization, a dearth of modern resources and up-to-date training and above all inadequacies in English and IT skills" as major existing issues in the system of education. To bridge the digital gap, it will require that leaders have a vision of where they want to lead, how to choose the right people, and how to accomplish objectives that flow from vision. Even with the enormous potential and academic advantages that innovation and improvement of communications afford, with the direct participation and support of education leadership, this power cannot be pushed to its full potential. Thus IT leadership requires many of the characteristics common to all leaders, but also requires special abilities and insights into the impacts of technology.

It is impossible to deny the tremendous effect rapid technological growth has had in the society. This explosion of new technologies has changed the way we live, from the way we do business, to the way we communicate with each other. Technological advancements are also affecting the way we teach and learn.

"Parents want what's best for their children, and parents now realize that education today has to be different than what was provided for them" (Parent, Mid West Regional Forum). As such, parents demand quality and sustainable education for Sri Lanka. Furthermore, the business world demands that our schools prepare educated workers who can use technology effectively in the global marketplace.

The Sri Lankan government, State legislature, Ministry of Education and Higher Education (MOEHE), National Institute of Education (NIE) and other policy makers are increasingly convinced that technology is a central element of educational reform and improved student learning. New skills needed in the workplace are catalysts that spur technology use in the classroom. Recently, The Minister of Education states "Now there is an appreciable consensus that a higher proficiencies of literacy in English and of Information Communication Technology (ICT) skills must necessarily be provided with greater emphasis and higher resources commitments, as it would open the gateway for our younger generation to be successful within a Borderless World" (Daily News, 2002).

The above proficiencies are expected to create a "Leap frog effect" in the development of our youth, enabling our youth to find better employment in Sri Lanka and also in other countries to

become truly enterprising, resourceful and competitive" (2002, Daily News). Furthermore, leaders of education have realized that the integration of IT into the school system is essential to achieving the education vision of 'high skills to every student' to bridge them for local and global market.

By the 21st century, forty percent of employers will requires skills in computers in network use in Sri Lanka. Thus a student, who does not know the essentials of using computers, word processors, spread -sheets, databases, networks, and operating systems, will be at a distinct disadvantage. Having a population of 18 million, student enrolment grows rapidly while the nation's experienced teaching staff declines.

An estimated 25,000 teachers will be recruited by the year 2003. Classroom teachers are key players in the effective use of technology to improve learning but if teachers do not understand how to employ technology effectively to promote student learning, the millions of dollars being invested in educational technology initiatives by the World Bank, will be wasted. Thus the nation's teacher education institutions must bridge the gaps teaching, learning technology gap from "where we are now" to "where we need to be". For teachers, breaking away from traditional approaches to instructions means taking risks and venturing into the unknown. Presently, this is precisely what is needed in Sri Lanka.

Today's teacher candidates will teach tomorrow if they are provided with needed skills in technology. "I am changing the way I teach, because of the things I am able to do now, with the acquired new skills of technology" is the preferred response of teachers for Sri Lanka. In the process of achieving this preferred future, the biggest obstacle to the implementation of

technology in education is not only a lack of hardware but also rather the fact that many teachers are incompetent or there is inadequacy of computer proficiency. It may also go against long held, traditional or even cultural beliefs and values and expectations.

The challenge teachers face is enormous. The challenges for leadership in this century are significant. Organizations have begun proactively to deal with the questions and challenges to be well positioned to succeed. It needs planning and implementation to build and develop the competencies and skills critical to success. With regard to success in education, IT is becoming a key characteristic in all levels.

The Benefits of IT Based Education in Sri Lanka

The world has changed. Information in many forms, such as text, audio and video is increasing at a tremendous rate. The need for communication skills to access this information is becoming more critical. In the last two decades the world has progressed through the 'Information Age' and into the 'Age of Communication'.

The skills needed to compete in the world market place are becoming more complex. More importance is being placed on the ability to collaborate, problem solve and communicate effectively. These areas must be stressed if Sri Lanka wants their students to have the skills necessary to be successful in tomorrow's global workplace.

The professional literature lists three literacy skills for the twenty-first century as accessing, thinking and communicating. Accessing includes reading in both print and digital form, listening in person, via videoconference and on the telephone, and researching both in print and

on-line. Thinking is defined as "discriminating, analysing, and interpreting textual, numeric, audio, and visual information". Communicating requires writing both on paper and on-line, presenting both orally and with multimedia and speaking at least English and one other language. The classroom has changed too. Students with a variety of languages and abilities are taught together in the same classroom. Research has shown that students learn more effectively this way, but at the same time, teachers must meet a wider variety of needs. The students who are currently in the classroom were born into a multimedia world, with much of the conventional school curricula available in electronic form. They are not growing up in the same print-dominated culture in which their parents and teachers were raised.

To quote David Thornburg, "We need to prepare our students for their future, not our past". In order to accomplish such a future, leaders in education should exercise effective leadership qualities. Although it has been introduced in the education system, The Education Minister claims, " we cannot be happy with the achievements up to now. Far greater effort and a serious commitment of resources will be necessary in order to achieve the objectives of the National Policy of IT" (Daily News, 2002). Thus the issues, concerns and challenges of new IT initiatives include many exciting collaborative efforts such as: 'Professional development opportunities, World Bank initiated funds and technical assistance; IT oriented curriculum; and teaching and learning' through programs.

At the same time, the shift towards the interpretation of knowledge, with the aid of technology, requires robust management and leadership at 'State level', 'System level', 'School level', 'Head of department level', Teacher level' and 'Learner level' of operations. The leaders have

not been willing to experience risk by leaving the comfort zone 'the way that we have always done it' to 'Calculated risk- taking'- (open to possibilities, questioning assumptions and taking a stand). But taking such a risk is precisely what is needed at the recent time in Sri Lanka, which is the focus of this study. The most successful organizations today are "emphasizing the importance of knowledge, harnessing it, and speedily integrating it across the organization". These become the ways to strengthen the firm in the marketplace. Information technology is driving the process; and as a result, the way that companies are organized is undergoing a massive change. The high rise pyramids of hierarchical corporate structures are being transformed into the low-rise of the flatter organization - less bureaucracy, more teamwork, and greater dispersion of responsibility, information and decision making. These leadership qualities in leading changes will infuse IT driven education system s in Sri Lanka.

Innovation and Change in Education

Educational institutions, like all other organizations, require proper leadership and constant monitoring to identify areas for potential improvement in establishing IT oriented education systems. However, in Sri Lanka, educational reforms are often not well implemented. This results in a massive waste of finances, human resources and lost potential. "It is the hottest word in the job market. So everyone is studying IT, but how many have access to computers? How many IT trained professionals can the job market absorb?" are some of the issues addressed in a recent education conference in Sri Lanka (2002, Daily Mirror)?

The process of change is complex, with many different types of change being possible. Further, there are a number of differing strategies for implementing these changes with the success of

implementation being highly variable. Factors that drive change may be internal or external to the environment (Yee, 1998).

Innovations may be initiated at any level in the organizational structure (Swenson, 1997) and reforms may be systemic or local (Reigeluth, 1994) in nature. But how could the education management system of Sri Lanka develop a dynamic approach for radical technological change? A strategic development model can be easily devised.

Vision and Mission in IT Driven Education

Education leaders should develop a clear educationally focused vision and a well-defined mission statement, collaborating with school staff and community members to agree on the type of learning, beliefs and goals that are important. A 'Vision' means an image of what the school can and should become. It is deeply embedded in values, hopes, and dreams. A 'Mission Statement' is more specific and often defines what the school is trying to accomplish and for whom. It can be developed from the vision itself. Goals and Objectives' still more specific and concrete, are derived from the vision, and can be used to focus on change and the improvement of efforts.

Education leaders in any field should be visionary (Powell, 1996) to help develop a mission that is centered on student learning. The school mission should concentrate on key areas of high-quality student learning. But it also can concentrate on establishing a professional work environment that supports collegiality, improvement and profession growth, and an

understanding of the importance of diversity and equity. In order to be successful, effective leadership skills in IT is essential. Such education leaders need to be 'Innovative' (Avant, 1996), 'Creative' (White, 1997) and 'Action Orientation' (Kinnaman, 1996). Furthermore, Collective visions often grow out of collaboration, teamwork and empowerment. Such effective leadership qualities would make many schools broaden this goal by establishing collaborative and partnerships with outside agencies that serve students and their families at secondary stages.

The school's vision also can incorporate values and goals related to equity and justice, respect and appreciation for multi-ethnism and diversity, and concern for the academic success of all students, staff and communities. These views of the school determine how people spend their time, what problems they solve, and how resources are distributed. Moreover, a clear understanding of the school's vision and mission statement may lead to greater parent and community support. Thus, having a clearly defined and communicated vision supports active improvement and accomplishment of this initial stage of IT in education.

Educational Structure

The structural framework of education in Sri Lanka is hierarchical in nature. Basically there are state and private schools. The state educational institutions 'Primary and Secondary' are organized on many levels, from the individual classroom under the management of a single teacher, to groups of classrooms supervised by sectional head teachers, to a whole-school structure, under the guidance of the principal. Private schools and International schools

generally do not report to the MOEHE. Government schools in Sri Lanka are grouped into provinces and each province has a national school established with many resources. The IT facilities will be first introduced to these 12 provincial national schools. Quite a lot of technical support will be needed in national schools where the selected teachers are using technology, particularly if new or experimental systems are involved or extensive use is made of computer networks. At least five kinds of technical assistance are necessary:

- Help in planning for technology uses and acquisitions

- Provision of training in how to use new hardware and software

- Provision of demonstrations and advice on how to incorporate technology into instruction

- Provision of demand help when software problems or hardware failures arise

- Performance of low-level maintenance on the system

Newer technologies have more positive impact on student learning. The MOEHE of Sri Lanka is in the process of connecting all national schools and offices to a District wide network. Net days and technology foundation grants will enable the district and community, working together, to increase the number of classrooms connected to the district network. The current plan is to have the vast majority of schools connected by the 2003-2005 school years. Although schools will be connected, few will fully meet the district standards for network connectivity. World Bank Funding programs, parent groups and other grants will fund the purchase of computer technology at both the elementary and secondary levels. Budget limitations will leave limited opportunity for equitable

access to technology. This lack of access to new technologies will inhibit the implementation of a comprehensive professional development program to help teachers successfully integrate technology into their classrooms too. The district will continue to seek grant funding for training, however, dedicated district funding is required to assure the continuity of a meaningful professional development IT programs.

The relative importance of these functions may shift over time; as this project matures, there tends to be less need for teacher "hand-holding" to get over initial anxieties and lack of knowledge about how to use functioning equipment, but the need for maintenance increases as hardware ages. Further, there is a continuing need for planning and for figuring out an appropriate way to allocate resources and to make reasonable use of the less-powerful equipment in the school's inventory. Further, as projects mature and wide-area network resources for education increase, schools are likely to want to get more active in the use of local and wide-area networks, creating requirements for specialized knowledge in these areas.

Levels of Changes and Information Technology

System Level

Effective instructional technology planning and assessment must be based on collaboration. It must include community input from business, government, and higher education to identify the skills students' need for success in life. It must consider the emergence of technology as part of curriculum and the infusion of technology into

curriculum materials and student assessment. It must provide for the participation of the instructional divisions – "Elementary, Middle Level and Secondary Education" to identify the tools, systems, and training needed by teachers to support the curriculum. Finally, it must count upon the IT department of the NIE, to identify the best and most cost efficient means of reaching curricular and instructional goals through the identification and development of effective systems for supporting technology throughout the system.

District and school-level planning

In this initial implementation technology program, IT will become institutionalised because it will not be treated as a separate component within the State's education infrastructure. It will be integrated into the curriculum and incorporated into the mainstream of instructional programs. The technology applications initially will appear in state or local district curriculum framework guidelines, and will be part of the school improvement initiatives, but will not be considered in school level program evaluations. At the school level, the selected teachers will be involved in decisions about technology applications. It is expected that technology will have a positive impact on teaching and learning when teachers and principals work together collaboratively, to plan how to focus technology use in the classroom on regular curriculum activities. Here again, the effective leadership skills such as: 'Calculated risk taking', 'Intuition' and 'Tenaciousness' will need careful planning with teacher involvement to produce commitment to sustained integration of technology into teaching.

Classroom Level Technology Planning

Classroom level projects or plans for computer use will be provided for each teacher with a framework will be defined by instructional strategies, curriculum objectives, student needs, and assessment strategies. A classroom plan will be developed, implemented and will be updated and shared with other teachers and will be assisted by the selected change agents. Each IT teacher in the 'National schools' will develop a classroom level plan that focuses on curriculum priorities, school level priorities, student needs, instructional resource needs, and that expands teaching beyond what could normally be done with the existing text materials. Empowerment is a key to success. Shared knowledge and equal accountability will promote individuals' motivation for higher targets. As individual schools have unique cultures, practices and traditions, it is self-evident that an individual tailoring that is context-specific is required. The leadership style of the administrator will, to a large extent, determine the types of change that are likely to occur, together with the ultimate success of their implementation and subsequent improvement to learning outcomes. Lincoln (1987, 16) states that a "whole school approach" is necessary, with the need for shared decision-making and collaborative practices being paramount. In summary, the proposed IT leaders will develop a systematic plan encompassing a comprehensive needs analysis of learners, teachers and community.

The Role of the Teacher

In Sri Lanka, some may fear that computerized education will create a mechanised school system of automatons. But teachers will remain and provide the human element to ensure that education develops the whole person, not just the intellectual side. The primary mission of teachers will remain unchallenged: they will continue as educators, facilitators, and role models, with more time to do their job. The leaders have to play a

vital role in changing the attitudes of the teachers and the parents. With this innovative task, children and teachers will both benefit. Freed of traditional time-consuming duties, 'Leader Teachers' will mentor and monitor children as they progress.

Of all the changes that will flow from computerized education, perhaps the most visible will be the new relationships that will develop between teachers and students and a new learning culture. No student will pass through school without individual attention; a teacher will know the child, and the child will have a specific teacher as individual guide and helper. Computerization will allow smaller schools equal benefits because all will have superior learning opportunities. IT Leaders should be able to create the needed background slowly and steadily for the parents and society to accept the changes in this digital learning culture.

Role of Teacher Education Programs

The main focus is upon the planning document, reflective of interaction among all components in the planning cycle. Teacher educators of the NIE will have a tremendous responsibility, because there is an opportunity to create an environment in which pre-service teachers may learn about and experience most aspects of technology planning. Increasingly, teacher education programs require some computer literacy training (Arntson, 1991). Teacher education, as a whole, faces a challenge to provide opportunities for pre-service teachers to understand basic planning concepts along with their technology-rich experiences. The desired outcome of effective technology planning is that the most appropriate technologies are infused in the most natural manner into a maximally- effective instructional or administrative program so that all parties concerned

have equitable access and achieve world-class benefits from routine use of the technologies. One goal of IT leaders in the field of planning is to ensure that the highest quality of information attainable is spread among schools. If this recipe for planning is followed, then disseminated throughout the country, students in our nation's schools will enjoy a richer, more challenging, rewarding educational experience while sailing in the wind to the desired direction.

Presently, as the education system of Sri Lanka is in chaos, the IT leader must be a self-achiever and should be motivated to become a proactive leader and role model. Changes in technology often produce a "chaotic situation" where change management in the use of instructional technology in teaching and learning becomes increasingly important (Fitzgerald, 1998). The IT leader must be ready to embrace that challenge. The field of IT leadership will be of extreme importance in this new millennium as technology (equipment, software, hardware, and infrastructure) continues to advance rapidly and change becomes imperative. Globalization, fierce competition, the remarkably diverse workforce, the continuing explosion of information and technology, economic and social upheavals are strong forces that demands that education in IT be implemented across the learners. In addition, the MOEHE is accountable for the financial grants of the World Bank. In fact, the message is clear: If survival is the aim, change is the game, change not only in how our work gets done, but in how we think about our work, our enterprises, ourselves, our lives and the changing cultures of the nation.

Staff Development

The NIE will describe the staff development and follow-up assistance necessary for successful implementation of these planned activities. The NIE staff development activities should largely be based on IT. As teachers develop their classroom level plans the school-level staff development program could be designed. It must directly support the activities indicated in the classroom plans. Available staff development days made possible by school improvement programs funded by the state or provincial programs and school development plans, will be allocated to support the implementation of the NIE

Conclusion

Today the idea of a school as factory cannot be ignored; it cannot be cajoled or mandated into producing children who have the confidence and ability to manage their own learning as an ongoing lifelong activity. Radical developments in information and communication technologies are colliding with traditional learning and conventional education systems. Learning and schooling can no longer be regarded as synonymous. Business shows that successful learners need no longer be constrained by time, place or rigid structures. Knowledge about how the brain learns merged with opportunities created by technology, open up an array of new education design opportunities.

In this 21st Century the IT Learning Initiative is turning the system upside down and inside out. Paradoxically, the very same factors that produce the need for change present barriers for the achievement of that change. School culture, stake holders perceptions, societal effects, organizational structure and the nature of change itself are together creating both the need for, and method of, continuous improvement in IT education and its outcomes. A paradigm shift from conventional learning to using IT as part of a novel way of learning is required to

adequately serve the clients of educational institutions, which in turn, requires an alteration in procedures for improved outcomes. IT leadership skills, practices, and the structures that support them, must change in order to ensure that the citizens of the future - school children of the present - can exist and grow in a world characterized by change, unpredictability and enterprise in this digital knowledge era. Therefore, it is not only about the software, hardware, and simply reallocation of funds or the traditional learning cultures, it is more about the effective IT leadership skills in this innovation. Effective IT leadership skills, strong policy efforts, education investments and reforms are to be exercised in achieving sustainable IT oriented systems for Sri Lanka to be 'Sailing with the changing winds".

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WHERE IS THE LANGUAGE CENTER? ENGLISH, INTERNATIONALIZATION AND THE LANGUAGE CENTER

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ABSTRACT

In recent years, Mahidol University, responding to the perceived dominance of English as the international academic lingua franca, has moved to mandate the writing of all postgraduate theses in English. This has not been an easy or uncontroversial move. The whole issue is surrounded by the vexed question of what has been called "linguistic imperialism"; in fact, the decision has been challenged successfully in the courts on the grounds that the policy discriminates unfairly against those who cannot speak English. Nevertheless, Mahidol has continued to move in this direction.

Working with Robert Phillipson's notion of "linguistic imperialism" this paper examines the ways in which "English" has come to be seen as synonymous with "international" and to be viewed as a passport from the non-English speaking periphery to the English-speaking center. It questions the increasingly prevalent institutional policies that privilege English over the local language and speculates as to the pernicious effects in the areas of equity, access, diversity and excellence that may result from these policies.

Where is the language center? English, internationalization and the language center

BACKGROUND

In recent years, Mahidol University, one of Thailand's foremost educational institutions, has moved to mandate the writing of all postgraduate theses in English. This decision is seen as part of a process of extending and strengthening Mahidol's status as an international university, "of achieving international standards" and also as being consistent with the Ministry of University Affairs' promotion of "the internationalization of higher education and strengthening of international programmes". Indeed the Ministry, in its *Long-Range Plan for Higher Education* has listed "internationalization", along with equity, efficiency, excellence, and privatization, as one of the five major dimensions of higher educational development in Thailand (Ministry of University Affairs).

This decision has been accompanied by the institution of support structures such as The Language Center, which is a unit of the Faculty of Graduate Studies charged with the task of helping students to write their theses in English and monitoring the standard of English achieved.

However, the move has not been an easy or uncontroversial one. Two years ago, a number of graduate students filed suit against the university's requirement that theses be written in English. The main grounds on which their case rested was that the university had not ensured the proficiency of the students in English and that the decision would

place financial burdens on them. Other arguments were advanced that English was simply a less appropriate language than Thai for particular theses.

The students won round one of the court battle when the Administrative Court ruled in favor of the principal plaintiff, Mr. Sarun Seenuthok, saying that "the university could not produce statistics to prove the English proficiency of its postgraduate students were lifted to international standards by its requirements for a thesis to be written in English" and that "the regulations placed a big financial burden on students as many of them had to seek help from translators" ("Student Conquers Thesis Law"). The university appealed the decision and on June 13, 2002 the Supreme Administrative Court declined to issue an injunction against the university to enforce the Administrative Court's ruling. Twenty-three very determined students are currently awaiting the court's decision, which is expected any day soon (Kaewmorakot).

Whatever the outcome may be, it seems that these students believe that the Ministry's desired dimension of "internationalization" – at least as interpreted by Mahidol - conflicts with the dimensions of "excellence", "equity", and "efficiency"; the resolution of these tensions will be important to the development of higher education in Thailand and this raises many interesting questions.

I am not a disinterested observer of this process. As a Visiting Professor at The Language Center in the Faculty of Graduate Studies at Mahidol University my salary and career prospects are contingent on the fact that Mahidol students continue writing their theses in English. If the court rules in favor of the plaintiffs and there is a mass desertion of

students to Thai, then I'd be out of a job. However, I believe that even in such circumstances many students – perhaps most – would, in fact, want to write their theses in English, regardless of whether or not it is compulsory, because they see English as the language which will reach a wide academic and professional audience and that demonstrated competence in it will improve their career prospects and thus their access to wealth, status, power and knowledge.

In any case, I will not be focussing very much except in a general sense on the legal battle at Mahidol; however, it does raise some issues that are of concern in Thailand and elsewhere. What I am interested in examining are the notions of "internationalization", a term that we increasingly take for granted yet one that can mean many things; the place of English as the "international" language, the way in which English and internationalization are increasingly seen as coterminous, as almost absolute equivalents. I would like to examine the competing interests at stake in the movements towards "internationalization" and its assumed concomitant, the use of English, and to question the possibility – perhaps even the desirability - of the "borderless education" that is a major theme of this conference.

INTERNATIONALIZATION AND ITS DISCONTENTS

When I was a young boy growing up in Australia in the sixties, there was a TV ad featuring a suave minor English celebrity by the name of Stuart Wagstaff. As a peripheral ex-colonial outpost, suffering from a severe lack of self-confidence and a fear that the

world was passing us by, a phenomenon that has been termed "the cultural cringe", many of our celebrities were imported second-hand from England. In fact, the TV and radio news presenters all talked with an Oxbridge accent that our indigenous actors tried to emulate. We desperately wanted to be international. Anyway, back to the ad. The tuxedo clad Mr Wagstaff, stepped off a plane, with a gorgeous and elegant woman draped over him, and lit up a Peter Stuyvesant cigarette; the voiceover then proclaimed Peter Stuyvesant as "the passport to international smoking pleasure". My point? Internationalization may be glamorous but not only can it stifle self-confidence, it might even give you cancer.[1]

Theorists such as Robert Phillipson have characterized nations where English is the dominant language such as England and the USA[2] as an aggressively self-confident center marketing their superior linguistic and cultural product to the less developed, less confident nations on the periphery who feel in desperate need of it to join the modern, international world.[3] What Phillipson calls the "myth" of English dominance in Asia, is a variety of Orientalism; English is not "culturally neutral but carries with it assumptions

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[1] As Australia became more assertive in its national identity and culture in the seventies, the new major spokesperson for cigarettes was chosen. He was Paul Hogan, a Sydney Harbour Bridge rigger with a broad Australian accent, a stereotypical Ocker whose slogan was "Anyhow, 'av a Winfield". He later became internationally famous for his film role as Crocodile Dundee; the cigarettes still give you cancer though so nationalism has its problems too.

[2] And indeed Australia, although as we can see from my previous example, Australia has some characteristics of the periphery too, and is now in fact encouraging linguistic diversification. Government sponsored radio and TV stations are now operating in a large variety of immigrant and Aboriginal languages.

[3] The idea of core/periphery or center/periphery, and how to reverse or undermine these polarities is one to which many TESOL scholars are responding. Particularly interesting is A. Suresh Canagarajah's study *Resisting Linguistic Imperialism in English Teaching* (1999). Canagaranjah recognizes that students want to learn English but that they want to learn it in their own ways and to convert it into their own language. He examines how this process unfolded in the extremely peripheral place where he taught English for a number of years – at the University of Jaffna in the Tamil heartland of a divided and war-torn Sri Lanka.

that serve to promote the interests of the rich and powerful" (qtd in Fox p.1). In an Asian context, English is generally seen as a key to educational and social opportunities and its wide dissemination will mean increased employment, reduced poverty and even political liberalization as English grants access to new technologies and democratic ideologies alike.[4]   However, Phillipson sees the massive pressure to acquiesce to English as promoting and perpetuating division between the elites who have English and the masses who do not. Furthermore, English, like Peter Stuyvesant cigarettes, is sold as the language of material success and hedonism, the language without which a person cannot really be fully part of the real world, at the center of things, in control (Fox 1-2)

This center/periphery relationship that Phillipson talks about, I believe, expresses itself in powerful anxieties about national and international identity. There was a striking, somewhat disturbing, series of ads sponsored by a major Thai bank, which was run very prominently during the recent World Cup. In these ads, various *farang* were seen teaching a succession of awkward and graceless Thais how to speak Thai, how to perform a Thai dance, how to make a *wai*, how to cook *tom yam kung* and finally how to give one of the famous Thai smiles. The punch-line, as translated to me, was something like "Aren't you ashamed that you have to be taught to be Thai?" This struck me as very

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The core/periphery issue is also examined in How Wah Kan's article "RELC's role in English Language Teaching in Southeast Asia (1968-2000): An Attempt to Centre the Periphery".

[4] A perhaps atypical, but nonetheless revealing, example of this type of thinking is a letter to the *Bangkok Post* entitled "Student Prostitutes Need Proper Jobs". The letter laments Thailand's dysfunctional educational system, which in the writer's opinion makes graduates unemployable. It then goes on to call for "initiatives" to stop the rot. Only one initiative is specified: " Where are the linguistics professionals willing and capable of teaching English, (*the international language of business and technology*[my italics]), to these young people" (McLintock). The letter assumes a direct relationship between English ability and highly desirable professional jobs and lifestyles. But English in Thailand can also be linked to low status service jobs such as taxi-driving, food service and prostitution. One could with equal justification assume that the effect of more widespread, better teaching of English may be a mere expansion of the potential clientele available to the student prostitutes who need jobs.

strange because during my sojourn in Thailand I have felt that Thais have a profound, indeed at times overwhelming, attachment to their cultural and linguistic inheritance. But it does seem that internationalisation is, at least in the minds of the Krung Thai bank, putting some sort of pressure on and causing some sort of anxiety about notions of Thainess and internationalness. This anxiety is felt in many areas of society; on the one hand, there is the constant pressure to internationalize, to globalize, to be part of the international marketplace and on the other, the tendency when things go wrong as they did in 1997 to cast internationalization and its institutions as the fall-guy for all of Thailand's problems. More reasonably, however, there is a desire to cultivate a conversation within the national society, to promote vigorous and independent national and local cultures. One of the graduate students fighting against the mandatory requirement to write in English explained that "Thai should be one of the languages of choice for academic writing because the university and its works are geared for society" (qtd in Kaewramakot). What does society mean? I presume that in this context, the student is saying that the university should respond not to some all-powerful international marketplace but rather to the national community.

The problem is that any national community is composed of competing interests and has links that that stretch in both directions: in to the center and out to the periphery. But where is the center and where is the periphery? It's entirely a matter of perspective as I hope the following two quotes, which to me illustrate vastly different concerns about education, vastly different interests, and vastly different experiences, all of which need to be accommodated in the Thai educational system, will illuminate:

"What's the point of sending them to school," one farmer asked, "when education has never helped our children appreciate farming? Instead, it has turned our boys and girls away from their roots." ("Trapped by the Same Old System" 11)

"Of the Thai students that we have," Dr Toemsakdi continues, "forty percent of them had their first degree outside of Thailand. So there are many Thais here who speak English better than Thai although they carry a Thai passport. So the atmosphere is somewhat quaint shall we say, neither Thai, nor English nor anywhere." (Fredricksen)

These two quotes were picked out of the same edition of the *Bangkok Post*. In the first, one can imagine the farmer's concerns. His children, given a smattering of English, bombarded by a media which glamorizes the international and its incarnation in English, reject the local, the provincial, the dull and old-fashioned, head for the center and are sucked into the vortex of Bangkok where with any luck they make it somehow but more likely than not live on another periphery there. For the ideology of internationalization, like Bangkok, an international city, is centralizing: the world is shrinking, we all need to know the same things, we need a common language, we all live in an international market place. However, the international world sells rice; it doesn't grow it. It doesn't account for the farmer's concerns.

In the second quote, Dr Toemsakdi of the prestigious Sasin Graduate Institute of Business Administration at Chulalongkorn is talking about a group of students who are

part of the international elite but strangely cut off also from any roots and owing their allegiance, if any, to the floating cosmopolitan world of international finance. In an earlier part of the article, the MBA that they are striving for is seen as a "meal ticket", a "license for entry". But entry to what? Their education is in fact not particularly international; it is purely American. Dr Toemsakdi explains that, "Although we are Chula we get a special waiver and we have adopted the regulations of Northwestern University and the syllabus of Northwestern University. The content itself is that of Kellogg School although it's taught by Kellogg and Wharton faculty mixed." (Fredrickson)

Internationalization and its concomitant English are glamorous; and glamour resides in the feeling of belonging to a community which rides above the general herd in terms of wealth and power. According to Phillipson, the imagining of such a community is a central part of the project of linguistic imperialism: "The community of English is imagined and comradeship is created in an ascription process equating English with bounty and other languages with the opposite. The promise of English is increasingly identified with a community of English users who are economically privileged in a world of inequalities and exploitation." (272-273).

INTERNATIONALIZATION AND ANGLICIZATION

In his book *Linguistic Imperialism* and in other forums where admittedly his work has been strongly challenged, Phillipson argues that the dominance of English world-wide depends on "its continuing advance and involves the suppression (displacement and replacement) of other languages and the defeat of competing imperialist languages" (36).

Part of the ideology that he claims English (and the major beneficiaries of English success - that is the USA and England) has successfully promoted for itself, is to be seen as the natural international language. He argues that "the pre-eminence of English is legitimated as being a 'common sense' social fact, thus concealing whose interests are being served by the dominant ideology and dominant professional practice" (76). He says that there are three sets of arguments that are used to promote English:

     - capacities: English-intrinisc arguments, what English *is*

     - resources: English-extrinsic arguments, what English *has*

     - uses: English: functional arguments what English *does*

The "what English is" argument claims that English is a language of infinitely rich expressive resources, the language of great literature and noble sentiments. The "what English has" argument claims that English has the experts, the teachers, the dictionaries and the textbooks and the reach necessary to sustain an international language. The "what English does" argument, which to me seems currently the most potent, and certainly the one that appeals most to institutions of power who see English as the international language and are in a position to further its expansion, "credits English with real or potential access to modernization, science, technology, etc., with the capacity to unite

people within a country and across nations, or with the furthering of international understanding" (271-272).

Phillipson's arguments have been attacked from various quarters; David C.S. Li sees English as simply a practical and necessary economic tool which Asians are making their own while Hong Kong Baptist University Professor William Littlewood goes further, seeing "Western pedagogical approaches" and, by implication, the English language which invariably accompanies them as liberating (Fox 2-3).

Furthermore, his arguments are couched in an unfashionable and jaded Marxist style of rhetoric which will undoubtedly alienate the aggressively capitalist educational institutions of Asia where success is admired and English is a visible sign of success, a success that Asia wants to be a part of. For many, speaking and writing English well is simply something that must be done. However, there are many points on which I think Phillipson deserves consideration. Certainly, his argument that English is promoted as part of a hedonistic lifestyle seems true. The editor of the *South China Morning Post* commenting on an advertising campaign whose catchphrase alluded to English as "The Language of Success", comments that "a command of English is a sign of a well-educated person… We play on that sentiment: to be seen reading the SCMP is a sign of success in our commercials" (qtd. in Gold 3)

It seems a little sad if the education system here were to buy completely into these ideas: that English is the ultimate status symbol and that without it one is ignorant, incapable

and badly educated. When I have surveyed my students on why they want to learn English, an answer I often get is that they want to be able to "communicate". This may be a mere slip of the pen but behind it may lie a real feeling that true comprehensive communication can now only take place in English. This type of promotion of English merely serves to increase insecurities in the vast majority. It sells English and Internationalism in the same way as the Peter Stuyvesant cigarettes that I mentioned before – speak English and you can have it all.

Also playing into the conflation of English and international success are promotions such as one by the Study Abroad Program at Rangsit University. This makes amazingly hyperbolic claims about internationalization that completely ignore the realities for the vast majority of people. What exists for a tiny English-speaking elite is presumed to exist everywhere and for everyone:

> The world has become smaller and the new buzzwords are 'internationalization' and 'globalization'. What it means is that our society is changing. Borders don't exist anymore and people travel to any destination in the world.

Borders don't exist anymore. One recognizes here the pervasive effect of advertising with its "buzzwords" and shallow instant appeal. The promotion fails to mention that it is only for a small elite that borders don't exist. Borders certainly exist for Burmese and Cambodian immigrant laborers who are periodically detained and sent back across the border. They exist for Thai hill tribe members who currently have no national status.

They exist for the Indonesian and Bangladeshi laborers in Malaysia who were recently sentenced to detention, deportation and whipping for illegal entry ("Seven Foreigners to be Caned") They exist for the boat people languishing in Australia's desert detention centers.

The promotion at no stage of its preliminary advertising spiel mentions English; it focuses on internationalization but it is significant that of the 12 classes in the Study Abroad Orientation program, all are conducted in English and eight are intensive English classes. By this elision, English and international come to mean the same thing ("SAO Orientation Course 2001").

I too have fallen prey to the same easy assumptions about English. I have been working at Mahidol University since late March 2002 and I regard the work that my colleagues and I do as a very valuable service. We conduct classes in academic writing in English that the students seem to enjoy and which prepare them for the difficult task of writing advanced degree theses; we hold English grammar workshops and thesis writing workshops; we edit and proofread students' thesis abstracts to get them up to a good standard of English. There is a lot more we could do if those perennially desirable commodities – time and money – were more available. We could be more involved in working right through the thesis process and identifying weaknesses at various stages.

I work as I said at The Language Center. We teach English reading, writing and speaking. Yet it was only when I began writing this article that I realized the significance

of the name of my workplace. It is not The English Language Center –it is *The* Language Center. This must be because English is no longer a language, it is *the* language. Similarly, another unit that teaches English exclusively is the Chulalongkorn University Language Institute and I'm sure that one could find many other examples of this nomenclature, which indicates that English equals language and language equals English.

However, all this may be mere nitpicking. In the international marketplace of ideas English does seem to be winning the battle. For instance, Rudichek Krechel, a German teacher in Thailand concedes in the opening line of an article that seeks to persuade Thai students of the desirability of learning German that "[t]he need to learn English is obvious". German would be a useful third language but not the absolutely necessary one.

English is the international lingua franca of science and technology, the Internet (although perhaps less so as the net develops), air traffic control, international trade and diplomacy and a hundred and one other arenas of human behavior. As a native English speaker, I have the inside running; I find it very easy to use, a tool of great power and scope. And, I agree that English must be taught here and taught extensively and well and the demand for it will have to be satisfied. However, does English need the institutional leg-ups such as compulsory English theses that it is constantly being given? If it is going to succeed, why not let it fight it out on its own terms? Phillipson, I think, asks a very pertinent question that in the next section I want to attempt to find some answers for: if the arguments for English are based on what it is, what it has and what it does, then shouldn't we try and find out what it isn't, what it doesn't have and what it does not do.

If we don't ask this question, then we may end up missing out on many of the things that local languages can give us which English may not. Anglicization and internationalization, borderlessness and globalization, are in danger of becoming "obvious" social, political and cultural facts; and the language and aspirations that surround them can turn them into panaceas for any disease. And the danger of anything that is "obvious" is that no questions need be asked about it.

LOCALIZATION AND INTERNATIONALIZATION

English, as we have seen, is increasingly seen as the international language par excellence. We need it to live in the international world. But do any of us live all our lives in an international world? I think not. We live in a multiplicity of worlds and languages that range from the familial, to the local, to the national, from the academic to the everyday. The university, if it is to live up to its ideal as a place where all varieties of knowledge can be investigated must reflect this multi-dimensional reality and not just the uni-dimensional model of internationalism which could merely lead to feelings of helplessness, inferiority and alienation. I want to speculate as to some of the things that might happen if English were to become the exclusive, or even dominant language of academic discourse in Thailand.

Firstly, we might see a diminishing concern with local issues. If students have gone to the trouble to learn an international language they may be tempted to tailor their research to reap the benefits of the wider international audience that is such a prime motivation for writing in English. Certainly, while the students I teach who are writing in scientific

areas that have an across the board application tend to be quite accepting of the fact that English is the language that they should be writing in, students who are writing in what I would call Thai-specific areas tend to think more often that they should be writing in Thai. Perhaps some would be tempted to opt out or to write something that is more natural to English than Thai. Another consequence could be that students might tend to ignore Thai sources because of practical problems such as translation.

Secondly, English is often said to guarantee a potentially wider audience. It's obviously true that more people can access work in English than in Thai - more people can read English. But is size the only thing that counts? A local audience may be a more interested, engaged and reactive one. A student writing a thesis on agricultural problems in the north-east of Thailand would probably want his work to be read or at least to filter down to the people who can make use of this knowledge. A student writing on Thai musicology and traditional instruments would probably want it to reach the practitioners of the art, whose primary language would probably be Thai. Even in the more complex international fields of science, one could argue that this information should be made available to the base of society. Let's not forget that the scientific enlightenment in Europe was at least partly accompanied by a shift from Latin to local vernaculars where the structures of thought were less ossified and new questions could be asked and new answers given. As one of the Mahidol students argued, "The academic merits are measured by usefulness and application, and not because papers are written in English" (Kaewmorakot).

Thirdly, for all but the most gifted linguists, writing in a second language involves a diminution of expressive power. I speak and write Spanish as a second language to a fairly high level but I must say it would terrify me to have to write a thesis in it. I would sharply feel the loss of nuance, of idiom, of an automatic vocabulary, things which in themselves are generators of thought. If I had to do so, I might be tempted to opt for the less complex topic, the more conventional approach, the easier questions and solutions. I have tremendous admiration for the students I see who write their theses in English because it is such a daunting task. However, if there is one tendency I have noted in a number of theses, particularly in the social sciences, is that they seem to be fairly formulaic and often heavily reliant on lightly-interpreted statistics, something which to me indicates a lack of confidence in their expressive ability in English. (To be fair, however, this is merely an impression and if the tendency does exist it may be caused by many factors)

Fourth, if everyone in a country such as Thailand were to write their theses in English, the local language would be impoverished as those who are best equipped to nourish it would be busy writing in English.

Fifth, if English is regarded as the sine qua non of languages, other foreign languages would suffer and niche markets would be lost. It's hard enough to learn one foreign language. If you absolutely have to learn English, where will you find the time for Burmese, Mandarin, French, Greek, Chinese, Sanskrit and the thousands of other languages, dead and alive, that have something to teach us? Not to mention the fact that if

English is regarded as the key to success, other studies will have to be ignored. Life is short and we can only learn so much.

Sixth, there is already, as in most countries, a pronounced lack of equity in the Thai education system. I think it is fair to say that the richer you are the more likely you are to be good at English already. You've had the benefit of expensive language tutors, holidays and student exchange programs abroad, and good schools with native teachers. So consequently, the poor would have another hurdle placed in front of them. As it is, many university students are paying large sums for thesis translation, proofreading and editing and for intensive English courses. (And parents are paying for very young children to get the head start that English is presumed to give them.) Perhaps this will pay off for them in the international world and they will be richly rewarded for their investment; but others may be prevented from even entering the race. We could end up with an upper caste of well-bred, well-educated cosmopolitan English speakers and a lower breed who only speak the local language. In nineteenth-century Russia, the aristocracy in many cases completely lost touch with the native language as French was the fashion, a fact that no doubt had repercussions in the events of 1917. Could it happen here? Chang Noi, in a fascinating article about changes in Thai identity, writes that he recently

> watched a brilliant film about hill people petitioning for Thai
> nationality. Strikingly, the leaders were speaking Thai much better
> than, ummmm, several Cabinet ministers. Speaking Thai properly used
> to be one of the tests for "being Thai". But what is happening when
> those running the nation can't do it, and those denied nationality can.

Even very well-intentioned programs can reinforce the gap between rich and not so rich. The Yothin Burana school has a programme to teach a Thai curriculum in both English and Thai. The Exceptional Science and Mathematics Project sounds good but on closer examination it begins to resemble an apartheid system. The English programme has a teacher/student ratio of about one to seven while the Thai programme has a ratio of about one to twenty. Over the six years of secondary school, the English programme costs B554,500 which compares very favorably to the more expensive international schools. The students in the Thai programme pay the standard government fee of B375 per term (Pramulratama). It certainly seems likely that many students and parents in the Thai programme would like to be in the English programme, both for the smaller teacher/student ratio and for the advantages that English is seen to confer. But many would be simply unable to afford it. It must be particularly galling for them to experience this inequality on a daily basis - particularly as prior to taking the entrance examinations for the Thai programme students actually need to have higher overall grades than those taking the examinations for the English programme.

CONCLUSION

My intention in this article is not to denigrate the teaching or learning of English but merely to point out some of the potential hazards of thinking of it as the only path to knowledge and success. By packaging it this way, we are diverting people from a truly creative education. We need to get people to understand and be interested in language and languages for their own sake, not merely for cynical reasons of status and power. All

languages are capable of expressing much about the human condition yet none are capable of expressing all of it. People should be given the opportunity to learn English (and other languages) but we shouldn't condemn those who, because of their aptitudes or interests, do not learn it or do not want to learn it to the periphery. Furthermore, we should at least strive for some sort of equity in education and not simply build higher walls to keep the have-nots out. Absolute equity is of course impossible – life is not fair – but we should, I think, be aware of its unfairness to try and ameliorate it.

Globalization is a double-edged sword. It would seem to promise to gather all the world's riches into one market but instead of a diverse feast, what we may get is a choice of different McDonald's, slightly spiced according to local tastes, but bland enough so that everyone can eat them. The saturation penetration of English may achieve the same result in language. When we can all speak the same language, will we have anything to say?

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ORAL COMMUNICATION APPREHENSION (OCA) AMONG ACCOUNTING, FINANCE AND MARKETING MAJORS: A PRELIMINARY INVESTIGATION AT UITM, PERLIS CAMPUS

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Abstract

Utilizing the popular 24-item survey instrument developed by McCroskey (1984b), we investigate the oral communication apprehension as faced by accounting students at UiTM, Perlis Malaysia. The major result shows that where students are required to use English (Foreign language for Malaysian students), their apprehension level is higher than their counterparts' in the US; on the other hand, where Malay language is used, the oral apprehension of the Malaysian students is lower than their counterparts' in the US. The population in the study includes the first and final year accounting, marketing and finance students.

The Need for Good Communication Skill

The need for good communication skills cannot be overemphasized. Numerous literatures have been written on this need. Estes (1979) for example, found that practicing accountants ranked oral and written communication skills as the most important items in a list of 57 skill and knowledge areas.

Maes, Weldy and Icenogle (1997) indicated that writing and oral communication skills are very important to employers in hiring and promotion decisions. Accounting Education Change Commission states "to become successful professionals, accounting

graduates must possess communication skills, intellectual skills and interpersonal skills"
(AECC, 1990).

The Institute of Management Accountants and the Financial Executives Institute
(1994) also noted the importance of increase emphasis on communication skills in
accounting programs. The International association for Management Education
(AACSB), in revising its accreditation standards in 1990, included improving
communication skills as a required area in business courses.

In a study of personnel interviewers, Peterson (1997) found out that over 90% of
the respondents agreed that non-verbal and oral communication skills significantly
impact hiring decisions, less than 60% agreed that current job applicants display an
adequate level of communication skills and 91.7% agreed that increased communication
skills would be needed for employment into the 21st century.

Lau and Rans (1993) in a survey of accounting alumni found that communication
skills were ranked more important in career success than four other skills. The four skills
in order of rank are interpersonal, intellectual, technical accounting and general business
skill.

Despite the importance of good communication skills, various studies have found
that business and accounting graduates are deficient in communication skills. Ingram and
Frazier (1980) for example found that new business graduates are frequently perceived as
being deficient in the communication skills. They also identified the major oral and

written communication that accounting graduates need and found that graduates are perceived as deficient in many of them.

Bloom and Debessay (1984) noted that accountants were 'notoriously deficient' in communication skills and expressed the need for strengthening curriculum in the areas of written and oral communication. In 1989, the Big Eight accounting firms jointly issued a 'white paper' which voiced concern regarding the accounting graduates deficiency in needed communication, intellectual and interpersonal skills.

Mangum (1996) in his article noted that both hiring managers and human resource professionals indicated that poor communication skills were among the top 2 greatest shortcomings of job candidates and poor presentation skills were among the top 10.

Educators have long recognized the need for improving students' communication skills. Ingram and Frazier (1980), for example, found accounting educators, who frequently encountered students who are less proficient at oral communication, consistently rate communication skills very high in their priority list. In accordance with the recommendations of the Accounting Education Change Commission, many accounting educators are revising their curriculum to include specialized skills training in oral and other communication (Fordham and Gabbin, 1996).

Given the effort by many accounting programs to improve students' communication skills (May and May, 1989), questions arise as to why studies still show

that accounting students are deficient in communication skills (Andrew and Sigband, 1984; Kullberg et al., 1989). Elias (1999) suggested that the reason for this incongruity might be due to communication apprehension.

Research in Communication Apprehension

Communication apprehension (CA) has been defined as " an individual level of fear or anxiety associated with either real or anticipated communication with another person or persons" (McCroskey, 1984a p. 13). CA is a learned condition that has its beginning early in a person's life as a result of negative experiences while interacting with others (Friedrich and Goss, 1984). McCroskey (1978) has shown that communication apprehension is a relatively permanent trait, enduring and not subject to major fluctuation unless there has been major intervening variable present.

Some Research Findings of Interest

We undertake a brief review of literature on CA with particular interest on accounting students. The paragraphs bellows are some of the major research findings that interest us:

1. CA and Career implications

Daly and Leth (1976) found that high CA job applicants, though as qualified in all other aspects as low CA applicants, were *negatively evaluated*, less likely to be granted job interviews, seen as needing more training, and perceived as less likely to get along with co-workers. High CAs were more likely to *remain in a single position for a long*

period of time and were less likely to be promoted or advanced in their careers. Scott, McCroskey and Sheahan (1978) noted that high CAs are *less likely to desire advancement than others* since they foresee that such advancement would increase the communications requirements imposed on them. Penley, Elexander, Jernigan and Henwood (1991), reported that *job performance is inversely related to CA*. To avoid communication, high CAs have been found to *select occupation that involve low communication requirements* (Daly and McCroskey, 1975). For example Daly and Stafford (1984) have observed, "*highly anxious individuals select majors having significantly fewer perceived communication demands than those selected by low anxious people*." Daly and McCroskey (1975) found strong support for the proposition that students with high CA prefer occupations that require less communication, while students with low CA prefer occupations that require more communication. In the study, the occupations perceived as low in communication demands included accountant, statistician, computer programmer, etc.

2. CA and Learning Behaviors

Fordham and Gabbin (1996) noted that a student's apprehensiveness could affect his or her educational experience. Students with high CA are *less likely to participate in class discussions*, ask for clarification from the instructor or *seek assistance from tutors*. (McCroskey and Andersen (1976) reported that *student achievement* is partly determined by the students' communication behavior both directly and indirectly. Students with high CA are less likely to speak up and are thus at a disadvantage when it comes to informing the instructor of their progress and needs. CA scores are highly related to other student behavior in the classroom as well. *Selecting a seating location at the edge or back of the*

classroom, *enrolling in large-lecture sections over smaller class sizes*, and *avoiding tutor assistance* are examples of high CA student behavior that may impair educational performance (McCroskey, 1978).

3. CA and Level of education

Stanga and Ladd (1990) found that *beginning accounting majors had above average levels of oral communication apprehension compared with other students*. This is consistent with the findings of Fordham and Gabbin (1996), who found that relatively small numbers of the accounting *sophomores* were confident communicators or exhibit very low communication apprehension scores

4. CA and the effectiveness of intervention

The study by Fordham and Gabbin (1996) also suggests that although skill training can turn students with low CA into more confident communicators, those with above average CA did not improve. They observed that persons apprehensive about an interactive behavior (e.g. communication) are less likely to develop skills in that behavior and in turn a deficiency of skill is likely to reinforce the apprehension about engaging in the behavior This is consistent with McCroskey (1977) findings. McCroskey observed (p.90) "little can be done to cure communication apprehension in regular classroom. Requiring the students to participate will only aggravate the student's problem. Requiring the students to give formal presentation could have disastrous results."

THE NEED FOR OCA RESEARCH AT UiTM PERLIS

At UiTM Perlis, Accounting, Finance and Marketing remain the largest business related degrees. As reviewed above these graduates need to equip with good communication skills. However it appears to be the common experience of many lecturers that students are deficient in communication skills. As members of Accounting Faculty, it is our primary interest to investigate this issue. Since OCA has been theorized to affect communication skills, we would like to explore this research direction with the hope to better understand the nature of communication problems faced by our students. Specifically we share the reasons put forwards by Fordham and Gabbin (1996). They examined the extent to which CA is present in students who have completed a business education program that incorporates many common communication skills components. They give 3 reasons why there is a need to research in CA which could inhibit communication ability:

First, to enhance success in their subsequent careers students must not only possess but must be willing to use communication skills.

Second, students who suffer from CA may be educationally disadvantaged in the sense that it might affect not only the acquisitions of technical knowledge but also the acquisition of communication skills,

Third, since much of the faculty effort is being devoted to improving students communication ability the effectiveness of these efforts should be measured by their success in developing good communication rather than the mere imparting of a skill set.

RESEARCH QUESTIONS

The review of literature above has inevitably compelled us to ask the following questions in relation to our students here at UiTM, Perlis campus:

1. Are accounting students' OCA scores significantly different from the OCA scores of their Finance and marketing counterparts ?

2. Are accounting students' OCA scores significantly different from the average OCA score of their US counterparts (English based)?

3. Are OCA scores based on a second language (i.e. English, in this case) differing significantly from OCA scores based on a native language (i.e. Malay, in this case)?

4. Are OCA scores based on different language related?

5. Are OCA scores related to the following personal characteristics or preferences of Accounting students?

     a. Gender

     b. CGPA

     c. Preferred seating distance (away from the lecturers)

     d. Willingness to hold consultation with lecturers when facing problems

     e. Preferred tutorial group size

MEASURES

Below we describe the ways we attempt to measure the variables posed in the research questions:

1. **OCA (See Q1 to Q24, Appendix A)**

We adopted the measurement instrument used by Stanga and Ladd. The Personal Report of Communication Apprehension (PRCA) was first developed by McCroskey (1984b) and focused on oral communication. Although there are several versions to the PRCA, Fordham and Gabbin (1996) noted that the most widely accepted instrument is the 24-item one. They conducted a broader survey using this PRCA.

This 24-item instrument elicits an individual personal feeling about communication. It includes six items in each of four communication settings; public speaking, participation in meetings, group discussions and dyads (two-person conversation). It allows the researcher to calculate five CA scores for any person – one for each of the four communication settings and one overall score.

The instrument consists of both positively and negatively worded questions, Since we use 1 and 5 to represent "Strongly Disagree" and "Strongly Agree" respectively, we recode all positively worded questions in negatively worded so that high scores represent high OCA and low score , low OCA. The individual subscale score may range from a minimum of 6 (1X6) to a maximum of 30 (5X6) while the overall PRCA score may range from a minimum score of 24 (6X4) to maximum score of 120 (30X4).

The PRCA has been shown to have an internal reliability of approximately 0.94 and has shown a considerable evidence of validity (McCroskey, 1970, 1978,1984b). We retested the above instrument for reliability. The results are somewhat less impressive if compared to the past research. The less-than-impressive results could be due to reading

ability of respondents. We believe if the instruments were to be translated in Malay language, the results could have been better. Nevertheless the alpha is considered acceptable. The table below shows the test results.

Table:

*Results of Reliability Tests (**Alpha**) for each subscale*

and overall under the two separate communication medium:

Subscales	English	Malay
Conversation	0.8192	0.7699
Group Discussion	0.6732	0.6553
Meeting	0.8056	0.7818
Public speaking	0.7520	0.8199
Overall instrument	0.7921	0.7399

2. Average OCA of US Accounting students

According to McCroskey (1984a) the score has been found to form a normal distribution with a mean of 65.6 and standard deviation of 15.3.

3. Academic performance

We utilize the latest CGPA of students to measure academic performance. Though such measure is not without defect, we feel that it is the best available. The CGPA will be self-reported data. It is considered an interval data in the analysis.

4. Preferred distance from the lecturers (See Q26, Appendix A)

The students are given a diagram picturing typical seating positions on the Campus. They were then asked to pick a seat of their choice. Although the numbers are numerous, they basically represent the choice of the row picked by the students. Thus 11 to 15 mean row 1, the nearest to the lecturers, and 51 to 55 mean row 5, the furthest from the lecturers. We consider such data as interval data in our analysis.

5. **Willingness to consult lecturer (See Q25, Appendix A)**

We ask the students to response to this question:

"If I face problems in my study, I will discuss them with any lecturer

who can help".

Likert scale of 1 to 5 is used to indicate students' extent of agreement to the statement; 1 means strongly disagree and 5 means strongly agree. It is utilized as interval scale in our analysis.

6. **Preferred size of tutorial group (See Q27, Appendix A)**

We asked students to state their preferred tutorial group size up to a maximum number of 50 students. 50 is chosen as upper limit. The choice is somewhat arbitrary. It is based on our teaching experience at UiTM at Perlis campus. We seldom have a tutorial group which is larger than 50. Most tutorial groups are within the range of 10 to 30. This is used as a ratio scale in our statistical analysis.

METHODS

The original intention was to make all first degree students of Accounting, Finance and Accounting elements of the study. Very soon we realized that it was unrealistic to study this population. We decided to concentrate on part 1 and part 3 students of Bachelor students stratified by Accounting, Finance and Marketing degrees. As the number of student is not large we decided to distribute the research instrument to all 200 students through subject lecturers. The response rate for each degree is as follow:

	Part 1	Part 3	Total	Usable Responses
Marketing	30	30	60	37
Finance	30	30	60	53
Accounting	90	90	180	69

Students were only told that it was a research project on communication. They were assured that there were no "right" or "wrong" answers. They were reassured that their responses were strictly anonymous. We asked them to be as honest as possible in answering the questions.

RESULTS AND DISCUSSION

The findings to our research questions are stated and discussed below. To facilitate easy reading, the research questions will be restated and detailed statistical results will be shown in the appendix to the article.

1. *Are Accounting students' OCA scores significantly different from the OCA scores of their Finance and marketing counterparts ?*

Table 1a and 1b show results based on English communication situations. Although the samples statistics show that Marketing students have the lowest overall OCA and the finance students, the highest, the ANOVA results show no significant differences are detected in each subscale. If we relax the 5% convention, perhaps we may wish to pay attention to the differences detected in the subscale of group discussion (TOTEGD, p=0.125) and in public speaking (TOTEPS, p=0.111). There is no significant differences in the overall OCA among the three Majors as well (TOTOCAE, p=0.242)

Table 1c and 1d show results based on Malay communication situations. The same patterns of results recur although the OCAs are generally lower. Again there are no significances in OCAs among the three majors in all subscales and overall (TOTOCAM, p=0.144).

The results somewhat come as a surprise to us. Many argue that Accounting students tend have higher OCAs among the business students. The present study seem to have to lend support for such allegations.

2. *Are Accounting students' OCA scores significantly different from the average OCA score of their US counterparts (English based)?*

We conduct One-sample t-test. The results are table in Table 2a and 2b. We set the test value to 65, i.e. the mean OCA score of US Accounting students. This OCA mean score of 65 is compared to two OCAs calculated here: one based on English

situations (i.e.TOTOCAE) and another, Malay communication situations (i.e. TOTOCAM).

We assume that the OCA tests conducted in the US should be based on the communications where English is used. It is major language used in the US. It is also the native language for most of the respondents. This assumption may be inaccurate, but it appears reasonable.

Here at UiTM in Malaysia, our students speaks two languages: English and Malay. The former is their second language and the latter, native language. So we feel it is appropriate to conduct the comparison at two levels:

     i. English vs. English

    ii. First language (English in US) vs. First Language (Malay at UiTM)

We conduct two separate independent T-tests.

i. <u>English vs. English situation</u>:

OCA of UiTM Perlis Accounting majors is significantly higher than that of the US Accounting major. The mean OCA score of UiTM's Accounting students is 71.33 compared to 65 of their US counterparts.

ii. <u>Native vs. Native situation</u>:

OCA of UiTM Perlis Accounting students is lower than that of the US Accounting majors (62.2464 vs. 65) although the p value is slightly above 0.05.

Therefore on English to English basis, our students appear to suffer from higher OCA if compared to their counterparts in the US. On the other hand, our students seem to fare well in the native language situations.

3. *Are Accounting students' OCA scores based on a second language (i.e. English, in this case) differ significantly from OCA scores based on a native language (i.e. Malay, in this case)?*

We conduct Paired t-tests on all subscales and on total OCA scores. The results are shown in table 3a and 3b (**see Appendix A**) show that there are significant differences on all subscales and in total. English-based OCAs are higher than Malay-based OCAs. The results clearly show the accounting students suffer from apprehension in English speaking situations than in Malay speaking situations. The results seem to lend support to the study of McCroskey, Fayer, & Richmond (1985). They reported that Puerto Rican students are less apprehensive when communicating in their home language but more apprehensive when communicating in their second language.

4. *Are OCA scores related to the following personal characteristics or preferences of Accounting students?*
   a. *Gender*
   b. *CGPA*

c. *Preferred seating distance (away from the lecturers)*

d. *Willingness to hold consultation with lecturers when facing problems*

e. *Preferred tutorial group size*

As reviewed in the literature, OCA is said to affect academic performance, seating position in the classes, willingness to consult lecturers and class size preferences. Gender has also been shown to be related to certain subscales of OCA. We therefore conduct various statistical tests to detect such relationship. As shown in the Table 4a through 4e we are not able to reject the hypotheses of no relationship in all areas. We therefore conclude that this study fails to provide support the theory that OCA is related to Gender, Academic performance, seating positions, willingness to hold consultation with the lecturers and tutorial group sizes.

CONCLUSIONS

Various studies have found that oral communication apprehension had negative career and education implications. In light of these findings, it is important that more researches be conducted to study the effect of OCA on students in higher institutions of learning in Malaysia.

Another important area of research is the relationship between OCA and the medium of communication. We found that where students are required to use English (second language) as their medium of communication their apprehension level is higher when

compared to their counterparts in US and when Malay language (native language) is the

medium of communication, their apprehension level is lower than their counterparts in

US. This result is consistent with findings made by McCroskey, Fayer and Richmond in

1985 and seems to link oral communication apprehension to medium of communication.

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APPENDIX A: RESULTS

Results For RQ 1

Table 1a

		TOTECV[a]	TOTEGD[b]	TOTEMT[c]	TOTEPS[d]	TOTOCAE[e]
Marketing	Mean	17.30	14.16	17.97	18.95	68.38
	Std. Deviation	4.20	2.70	4.12	3.57	12.38
Finance	Mean	18.09	15.36	18.58	20.68	72.72
	Std. Deviation	4.32	3.70	4.15	3.74	12.60
Accounting	Mean	17.39	15.51	18.87	20.07	71.84
	Std. Deviation	4.62	3.37	4.19	4.07	12.32
Total	Mean	17.60	15.14	18.57	20.01	71.33
	Std. Deviation	4.41	3.37	4.15	3.88	12.46

[a] OCA Conversation subscale: Mean: Minimum=6, Maximum=30

[b] OCA Group Discussion subscale: Mean: Minimum=6, Maximum=30

[c] OCA Meeting subscale: Mean: Minimum=6, Maximum=30

[d] OCA Public Speaking subscale: Mean: Minimum=6, Maximum=30

[e] Overall OCA: Mean: Minimum=24, Maximum=120

Table 1b

		Sum of Squares	df	Mean Square	F	Sig.
TOTECV	Between Groups	19.345	2	9.672	.494	.611[1]
TOTEGD	Between Groups	47.211	2	23.605	2.109	.125[1]
TOTEMT	Between Groups	19.390	2	9.695	.561	.572[1]
TOTEPS	Between Groups	65.898	2	32.949	2.227	.111[1]
TOTOCAE	Between Groups	442.290	2	221.145	1.432	.242[1]

[1] *Note the large p-values; therefore no null hypotheses are rejected*

Table 1c

		TOTMCV [1]	TOTMGD [2]	TOTMMT [3]	TOTMPS [4]	TOTOCAM [5]
1 marketing	Mean	14.270	12.378	15.162	17.162	58.973
	Std. Deviation	3.429	3.112	3.338	3.797	11.224
2 finance	Mean	15.849	13.472	16.132	18.321	63.774
	Std. Deviation	3.774	3.226	3.873	4.205	11.015
3 accounting	Mean	15.203	12.696	16.449	17.899	62.246
	Std. Deviation	4.327	3.001	4.053	4.554	11.763
Total	Mean	15.201	12.881	16.044	17.868	61.994
	Std. Deviation	3.971	3.115	3.847	4.268	11.463

[1]. OCA Conversation subscale: Mean: Minimum=6, Maximum=30

[2]. OCA Group Discussion subscale: Mean: Minimum=6, Maximum=30

[3]. OCA Meeting subscale: Mean: Minimum=6, Maximum=30

[4]. OCA Public Speaking subscale: Mean: Minimum=6, Maximum=30

[5]. Overall OCA: Mean: Minimum=24, Maximum=120

Table 1d

		Sum of Squares	df	Mean Square	F	Sig.
TOTMCV	Between Groups	54.311	2	27.155	1.738	.179[1]
TOTMGD	Between Groups	30.211	2	15.105	1.568	.212[1]
TOTMMT	Between Groups	40.517	2	20.258	1.375	.256[1]
TOTMPS	Between Groups	29.362	2	14.681	.804	.449[1]
TOTOCAM	Between Groups	509.926	2	254.963	1.964	.144[1]

[1]. *Note the large p-values; therefore no null hypotheses are rejected*

Results For RQ2

Table 2a

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
TOTOCAE	69	71.8406	12.3212	1.4833
TOTOCAM	69	62.2464	11.7629	1.4161

Table 2b

One-Sample Test

					95% Confidence Interval of the Difference	
					Test Value = 65	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
TOTOCAE	4.612	68	.000	6.8406	3.8807	9.8005
TOTOCAM	-1.945	68	.056	-2.7536	-5.5794	7.212E-02

Results For RQ 3

Table 3a

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	TOTOCAE	71.8406	69	12.3212	1.4833
	TOTOCAM	62.2464	69	11.7629	1.4161
Pair 2	TOTECV	17.3913	69	4.6152	.5556
	TOTMCV	15.2029	69	4.3270	.5209
Pair 3	TOTEGD	15.5072	69	3.3678	.4054
	TOTMGD	12.6957	69	3.0015	.3613
Pair 4	TOTEMT	18.8696	69	4.1865	.5040
	TOTMMT	16.4493	69	4.0531	.4879
Pair 5	TOTEPS	20.0725	69	4.0668	.4896
	TOTMPS	17.8986	69	4.5541	.5482

Table 3b

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	TOTOCAE & TOTOCAM	69	.645	.000
Pair 2	TOTECV & TOTMCV	69	.693	.000
Pair 3	TOTEGD & TOTMGD	69	.455	.000
Pair 4	TOTEMT & TOTMMT	69	.564	.000
Pair 5	TOTEPS & TOTMPS	69	.704	.000

Results For RQ 4a (OCA and Gender)

Independent Samples Test: Female vs. Male

		t-test for Equality of Means			
		t	df	Sig. (2-tailed)	Mean Difference
TOTECV		.479	67	.633	.5745
TOTEGD		-.830	67	.410	-.7234
TOTEMT		1.697	67	.094	1.8104
TOTEPS		.862	67	.392	.9072
TOTMCV		-.388	67	.699	-.4362
TOTMGD		-.833	67	.408	-.6470
TOTMMT		1.471	67	.146	1.5271
TOTMPS		.608	67	.545	.7186
TOTOCAE		.805	67	.424	2.5687
TOTOCAM		.380	67	.705	1.1625

Results For RQ 4b (OCA and CGPA)

Correlations

		CGPA
CGPA	Pearson Correlation	1.000
	Sig. (2-tailed)	.
	N	69
TOTOCAE	Pearson Correlation	-.212
	Sig. (2-tailed)	.081
	N	69
TOTOCAM	Pearson Correlation	-.132
	Sig. (2-tailed)	.278
	N	69

Results For RQ 4c (OCA and Seating)

Correlations

		SEATS
TOTOCAE	Pearson Correlation	.133
	Sig. (2-tailed)	.277
	N	69
TOTOCAM	Pearson Correlation	.032
	Sig. (2-tailed)	.792
	N	69

Results For RQ 4d (OCA and Consultation)

Correlations

		ECONSULT	MCONSULT
TOTOCAE	Pearson Correlation	-.020	.062
	Sig. (2-tailed)	.870	.611
	N	69	69
TOTOCAM	Pearson Correlation	.161	.092
	Sig. (2-tailed)	.187	.450
	N	69	69

Results For RQ 4e (OCA and Tutorial Group Size)

Correlations

		TGRPSIZE
TOTOCAE	Pearson Correlation	.141
	Sig. (2-tailed)	.287
	N	59
TOTOCAM	Pearson Correlation	-.057
	Sig. (2-tailed)	.670
	N	59

AN EMPIRICAL STUDY ON ACADEMIC ACHIEVEMENT OF BUSINESS STUDENTS IN PURSUING HIGHER EDUCATION: AN EMPHASIS ON THE INFLUENCE OF FAMILY BACKGROUNDS.

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ABSTRACT

This paper explores on-going academic achievements of undergraduate students majoring in business and management studies in five major public universities in Malaysia. To examine the research issues, a study was conducted to determine the significant influences of positive learning attitudes, parental involvement, past achievements in Mathematics and English and family background on academic achievements. Researchers evaluate the academic achievements based on cumulative grade point average (CGPA) and relate it to the proposed variables from students' responses. To determine if relationships between these variables are strong, this study carried out several statistical analyses such as Pearson's correlations, t-test, ANOVA and a structural equation modeling. The overall finding provides a striking demonstration of the imperative influences of some of the family backgrounds' indicators toward academic achievement of business and management students in UKM, UPM, UM, UIA and UITM.

INTRODUCTION

Many studies conducted by education researchers showed that they are interested in the progress of academic achievement that would allow them to identify the importance of several variables believed to have great impact on academic achievement. This growing interests stem in large part from the growing concern for the declining level of academic

performances among Malays, indigenous groups (Bumiputras) and male students in higher learning institutions in Malaysia. Underlying these points are the general arguments that all parties concerned should pay attention to this problems.

Studies have shown that background characteristics can influence academic excellence. Among these characteristics are socio-economic status (Pascarella, Smart & Stoecker, 1989), gender (Betts & Morell, 1988; Pike, Schroeder & Berry, 1997) and ethnicity (Elkins, Braxton & James, 1998). Other factors influencing college performance include family structure (Hickman, Bartholomae & McKenry, 2000; Sandefur & Wells, 1999) and parents' educational background (Ting & Robinson, 1998). Past studies supported the propositions that parental educational background and perceptions of control exerted direct and indirect effects on children's grade point average (Nuran & Hande, 1993)

On the other hand, Simon (2001) indicated that race and ethnicity, family structure, gender and students' prior achievement, socio-economic status were among the main contributing factors toward higher grades in English and Maths, completion of more course credits in English and Maths, better attendance and behavior, eagerness to learn and preparedness. In his study, Simon analyzed reports from more than 11,000 parents of high school seniors and 1,000 high school principals. He also revealed that regardless of students' backgrounds and prior achievements, parental support and guidance; and conducive learning environment at home have positive influences on students' grades, course credits completed, attendance, behavior, and preparedness.

In addition, Alan Kai-Ming Au (1997) had conducted a preliminary study on factors influencing performances of business students. Using a sample of 103 first year business students at the Waikato Polytechnic in New Zealand, he concluded that students' academic performances may not only resulted from their level of intelligence, but may also be affected by psychological constructs. The t-tests results clearly indicated that personality styles of students are good indicators of their performance.

An investigation conducted by Amy (2000) on the achievements of cohort of 150 students enrolled at a large metropolitan university in California revealed that socio-economic status and level of parental education were significantly and positively correlated with grade point average (GPA). Zheng, Saunders, Shelly and Whalen (2002) also stated that several variables, including background characteristics, psychosocial and environmental variables, also had strong impact on academic outcomes. They indicated that this study offered new avenue for future studies in educational research and practices by providing a model that incorporated multiple factors related to academic achievement. Significant understanding of student outcome such as academic achievement can be gained through investigating patterns of interaction between variables measured before students entering a college and variables measured after two semesters of attendance.

Past research also suggested that social class, ethnic background and parental occupations were among significant indicators of academic success (Jesson, Gray and Trommer, 1992; Drew and Gray, 1990). The main findings suggested strong relationships between the socio-economic status of families and pupils examination performances.

Lastly, research by McCallum and Demie (2001) concluded that there were strong relationships between students' backgrounds and level of school performances.

METHODOLOGY

The emphasis of this study is to determine critical variables that have strong associations with academic achievement of students in business or management faculties in five leading public universities in Malaysia. Third or final year undergraduate business students were selected on the basis of a simple random sampling. Preliminary questions consisted of ratio measurement scales on personal and family backgrounds as well as past and present academic results. The questionnaires were conducted using interview method or classroom responses. To fully differentiated their responses, 7–point ordinal scales were use for questions regarding their perceptions toward learning attitudes, lecturers, parents, and universities environment factors. The researchers received 244 completed scripts of the sample instruments (see Table 1). The average age of the students was 22.14 years. There were 59 respondents from UKM, 43 completed questionnaires from UiTM, 50 students' responses from UPM, 46 usable questionnaires from UM and also 46 returned scripts from UIA. Reliability test was conducted and the result indicates that Cronbach Alphas for the critical variables are above 0.700. The purpose of this article is twofold. First, we examined the associations between cumulative grade point average (CGPA) and variables such as positive learning attitudes, parental involvement, family background and past achievements in SPM, Mathematics and English. These relationships were investigated using Pearson's correlations because some of the variables are ratio-typed data. Second, we determined whether family background

indicators have strong influences on academic achievement. We explored this issue using t-test, ANOVA and a structural equation modeling. Specifically, the main objectives of this paper are:

1) To explore correlations between positive learning attitudes, past achievements, family backgrounds and academic excellence (CGPA) of students in these universities.

2) To highlight the structural impact of each indicator towards the academic achievement.

3) To investigate the differences in means of students' achievements according to family backgrounds.

TABLE 1. The list of universities and sample size

University	n	Male	Female
UKM (National University of Malaysia)	59	12	47
UITM (University Technology of MARA)	43	13	30
UPM (University of PUTRA Malaysia)	50	6	44
UM (University Malaya)	46	13	33
UIA (International Islamic University)	46	17	29

CORRELATIONS

Many studies have shown that (Benbow et al., 1991, McCallum and Demie, 2001 etc.) there are several factors that may influence academic achievement of students. This study tries to provide an answer to whether or not factors proposed influence academic achievements of business students in five local public universities in Malaysia. Table 1 exhibit the list of the five universities included in this survey and also the sample and gender proportions. Since the first part of the data measurements was basically using ratio scales, Pearson's correlations were conducted to investigate the magnitude of their associations. Table 2 highlights correlations between academic achievements (CGPAs) and variables proposed in this study. CGPA has the highest correlations with past achievement in SPM or Form Five Malaysia Certificate of Education ($r = 0.226**$) and Mathematics ($r = 0.222**$). Obviously, skills in Mathematics are beneficial in dealing with most of the Business and Management courses. This is consistent with a study carried out by Xin Ma (1997) on the influence of skills in Mathematics towards academic achievements. In addition, this study suggests that academic excellence has strong associations with family's home location or area of upbringings ($r = 0.193**$) and monthly income of parent ($r = 0.178**$). Similarly, a study by Benbow et al. (1991) concluded that there was high correlation between academic achievement and family background, while McCallum and Demie (2001) found significant correlation between family socio-economic status and academic achievement. In addition, lecturing techniques and lecturers' attitudes ($r = 0.186**$) are also seen as significant contributing factors toward academic achievement and very crucial in the learning process. Analyses done by Benbow et al. (1991) using American Bank Data had identified nine factors that

showed positive correlations with academic achievement and two of the most important factors were time and quality of lecturing.

On the other hand, positive learning attitude has significant correlation with lecturing factors (r = 0.463**), parental involvement (r = 0.309**), and past achievement in SPM (r = 0.118**), and Mathematics (r = 0.158**). More importantly, these correlation analyses also suggest that to enhance academic achievement (improve CGPA), a student should have high motivation or a positive attitude towards learning (r = 0.184**). Previously, several studies have been conducted to investigate relationships between individual attitudes, environmental factors and past academic achievements (Anderson & Keith, 1977). All of these studies stressed the importance of student ability, past knowledge and personal background on academic results (Bloom, 1976). Monthly income of parent and good command of English (r = 0.173**) also has positive correlations with CGPA. In Malaysia, although Malay is the national language, many of the references in Business and Management are still in English. Setting of career objectives (0.117**) at an early stage also has significant influence on academic achievement.

Table 2 Pearson correlations between CGPA and other variables									
	1	2	3	4	5	6	7	8	CGPA

#	Variable									
1	Mean Positive learning attitudes	1.00								0.184 **
2	Mean Lecturer factors	0.463 **	1.00							0.186 **
3	Mean Parental involvement	0.309 **	0.352 **	1.00						0.104
4	Past achievement in English	0.017	0.102	0.012	1.00					0.173 **
5	Past achievement in Mathematics	0.158 **	0.094	0.005	0.242 **	1.00				0.222 **
6	Past SPM Result (Malaysia Cert. Of Education-Form Five)	0.118 **	0.043	0.029	0.283 **	0.601 **	1.00			0.226 **
7	Family home location	0.016	0.172 **	0.052	0.210 **	0.014	0.016	1.00		0.193 **
8	Monthly income of parent	0.070	0.067	0.040	0.252 **	0.129	0.110 *	0.333 **	1.00	0.178 **
9	Early setting of career objective	0.057	0.091	0.066	0.005	0.033	0.066	0.018	0.076	0.117 **
	1. *$P \leq 0.05$, **$P \leq 0.01$ 2. All t-tests are two-tailed 3. Sample size = 244									

On the contrary, parental involvement (r = 104) does not seem to significantly influence a student's academic achievement in this study. This finding contradicts with a number of studies conducted focusing on the influences of environmental factors such as parents, peers and time utilization toward students' academic achievements. For example, a research carried out by Fehrmann et al. (1987), found that the involvement of parents had significantly increased students' learning achievements. A study by Griffith (1996) also showed positive relationship between parental involvement and students' test performances. These relationships are unaffected by school characteristics or

175

socioeconomic of the student population. Even though the Pearson's Correlation shows positive r value (r = 0.104), it failed to exhibit significant association between parental involvement and CGPA. However, further investigation suggested that family backgrounds factors namely family home location or area of upbringings and monthly income of parent have significant correlations with high qualification in English. The positive correlation suggests that families from higher income brackets have children who obtained good results in SPM. In addition, the findings also suggest that most of the families with higher income lived in urban areas.

The result exhibited in Table 3 suggests that the phenomena of " always forgetting during exam" has a significantly strong negative impact on CGPA, while the rest of the negative attitudes' elements stated in the study failed to demonstrate any significant associations with academic achievement. However, further investigation shows that this phenomena has significant correlations with elements such as 'last minute studying", "inferiority complex", "lack of focus", "seldom consult lecturers for advice", "do not understand examination's questions" and " passive in classroom discussion". Since all the above-mentioned variables have an indirect relationship with academic performance, it is advisable to make students aware the importance of consistency in studying and to avoid procrastination. Moreover, to remember facts studied, a student should be more focused, consistently in touch with lecturers on academic matters and try to be more involved in classroom discussion. It is imperative to stress that students should not indulge in negative activities that can caused them their degrees.

Table3 Pearson correlations between CGPA and negative attitudes toward learning

		1	2	3	4	5	6	7
1	CGPA	1.00						
2	Always forget during exam	-.130*	1.00					
3	Last minute studying	0.121	0.324**	1.000				
4	Feeling of inferiority	0.112	0.454**	0.190**	1.00			
5	Lack of focus	0.077	0.222**	0.286**	0.344**	1.00		
6	Do not consult lecturer	0.107	0.250**	0.207**	0.253**	0.508**	1.00	
7	Do not understand exam questions	0.043	0.459**	0.259**	0.460**	0.256**	0.225**	1.00
8	Do not involve in discussion in class	0.078	0.372**	0.196**	0.263**	0.293**	0.433**	0.273**
1. *P≤0.05, **P≤0.01 2. All t-tests are two-tailed 3. Sample size = 244								

STRUCTURAL EQUATION MODELING (SEM)

The structural equation model presented in this paper (Figure 1) emphasizes the impact of family backgrounds on the present academic excellence of business students in public universities in Malaysia. This structural model includes variables such as home location of family, income of parent, levels of education of father and mother; and parental involvement in the learning process of these students. The variables in the model were operationally defined by manifest constructs from the variables proposed after an extensive literature review. This structural model is by no means trying to develop causal relationships between these variables but merely to highlight the structural loadings or

contributions of each manifest indicator on academic performance. The level of education of mother (mumqual) has been found to exert the strongest influence on academic achievement. The level of education of father (dadqual) also demonstrates high structural influence on CGPA (cgpax). The level of income of parent (pincome) has also been seen to enhance academic achievement since rich families may be able to provide better incentives in the learning process of their children. Home location of family or area of upbringings (location) and parental involvement (mparent) also exhibit positive structural loadings towards academic achievement.
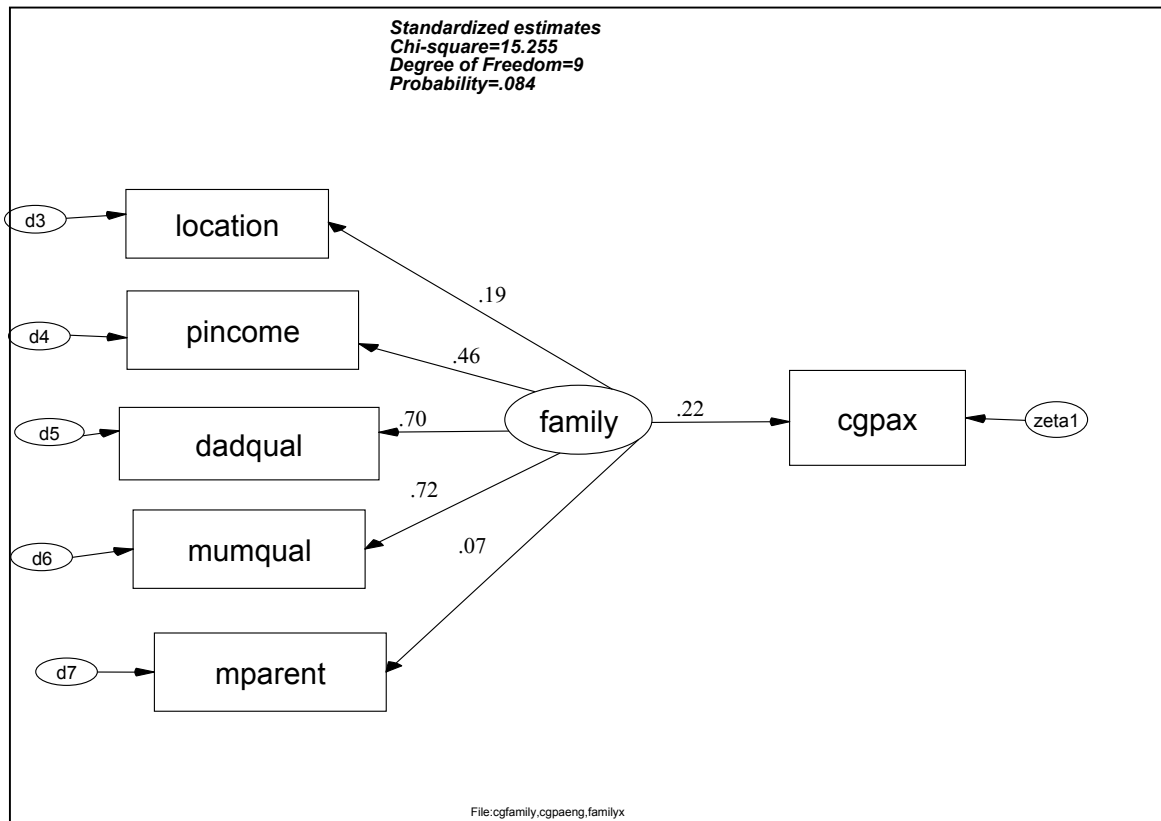
Figure 1. The result of the structural model on the influence of family background on academic achievement.

Specifically, Figure 1 shows the result of the structural linkages between family backgrounds and academic achievement. The structural result indicates that the model has a good fit with Chi-square value of 15.255, degrees of freedom equal to 9 and p-value of 0.084. This supports our assumption that the overall model is reasonable representative of the data. The idea is to exhibit a model that is representative of the data (in another words equivalent or fit the data). Therefore, in this test of goodness of fit, the probability value that we are looking for should be higher than 0.05. In addition, other statistical structural indices such as Bentler CFI (0.950), GFI (0.979), AGFI (0.952), Bollen IFI (0.952), NFI (0.890) and Tucker and Lewis TLI (0.916) further support the notion that the linkages have meaningful and significant relationships (Table 4). The structural effect of family background (family) on academic achievement (cgpax) is considered quite high (structural loading = 0.22*, S.D. = 0.014, t-value = 2.734), given that a multitude of factors affecting students' performance.

To explore further the family backgrounds taxonomy, we need to determine the statistical significance of parameters' estimates (Table 5). Standard errors and t-values are used to determine the precision of each parameter estimate. In contrast to the normal tests of significance, a structural equation modeling or confirmatory factor analysis requires t-values or criterion ratios of parameters larger than 2.00 in magnitude to be judged different from zero (Joreskog & Sorbom, 1989; Bollen, 1989; Mueller, 1996; Agus, 2001). The loadings of the variables (Figure 1) on its construct suggest that the level of education of mother (structural loading = 0.724*, S.D. = 0.138) has the highest structural impact towards academic achievement and this is followed by the level of education of father (structural loading = 0.700*, S.D. = 0.164), income of parent (structural loading =

0.457*, S.D. = 0.038), and family home location (structural loading = 0.194*, S.D. = 0.073). However, parental involvement (structural loading = 0.070, S.D. = 0.045), only exhibits minimal influence on academic achievement. The positive coefficients loading suggest that parental involvement exert a positive influence on academic achievement. Nonetheless, the non-supportive t-value, do not allow us to state this conclusion.

Table 4. Results of the Overall Model Fit

Statistics	Values
Chi square	15.255
Degree of Freedom	9
Probability Level	0.084
Bollen (1989) Non-normed Index (IFI)	0.952
Tucker & Lewis (1973) TLI	0.916
Bentler (1990) CFI (comparative fit model)	0.950
GFI (General fit index)	0.979
AGFI (Adjusted fit index)	0.952
NFI	0.890

Table 5 Measurement Results

(i) Constructs and Indicators	Standardised Loadings	Standard Errors	t- values
Home location of Family (location)	0.194	0.073	2.474*
Income of parent (pincome)	0.457	0.038	5.228*
Level of education of father (dadqual)	0.700	0.164	5.711*
Level of education of mother (mumqual)	0.724	0.138	5.228*
Parental involvement (mparent)	0.070	0.045	0.851
(ii) Exogenous/endogenous Path			

a. FAMILY→ CGPAX	0.215	0.014	2.734*

* t-value ≥ 2.00

THE INFLUENCES OF FAMILY BACKGROUNDS – t -TEST AND ANOVA

Recall that one of the primary objectives of this study is to investigate the differences in means of students' achievements according to family backgrounds. To determine significant associations between them, the data were segmented into several categorical groups. In order to investigate whether there are significant differences in the means of academic achievements (cgpax) according to personal and family backgrounds, a t-test and several analyses of variances (ANOVA) were conducted. Table 6 presents the result of the t-test and the analyses of means of CGPA by home location of family or area of upbringings. This test is appropriate because we are testing simultaneously for differences in means between two groups. The hypotheses that we are proposing can be stated as follows:

H_o: The mean CGPA of students from the urban area is equal to the mean CGPA of students from the rural area. ($\mu_1 = \mu_2$)

H_a: The mean CGPA of students from the urban area is higher than the mean CGPA of students from the rural area. ($\mu_1 > \mu_2$).

An independent samples t-test was determined to verify this assumption. Levene's test for equality of variances concluded that the data has equal variances with significant t-test for equality of means. In addition, the summary of means indicates that the mean

CGPAs of urban students is higher than the mean CGPAs of rural students. The t-test result shown in Table 6 supports the stated alternative hypothesis since the t-value is significant (significant t = 0.022**). This finding supports the proposition that academic achievements of students from urban areas are better than students from rural areas. In addition, Table 7 shows the proportion of gender by family's home location.

TABLE 6. ANOVA and analysis of means of CGPA by family's home location / area of upbringings

Location	Mean CGPA	Std. Dev.	n	t-value	Sig (2-tailed)
Rural	2.911	0.38291	109	2.305	0.022**
Urban	3.030	0.40271	126		

Table 7 Descriptive Statistics of home location

Location	Frequency	Percentage	Male	Female
Rural	109	42.6	23	86
Urban	126	49.2	37	89

In addition, Table 8 exhibits the result of ANOVA and analyses of means of CGPA according to monthly income of parents. This test is conducted because we are testing simultaneously for differences in means of five different groups. Our assumption can be written as follows:

H_o: $\mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5$

H_a: At least one of the means of CGPA according to monthly income of parents is

different from the others.

TABLE 8. ANOVA and analysis of means of CGPA by monthly income of

parents

Monthly income	n	Mean CGPA	F-value	Sig F
Below RM 1,000	16	2.9644	3.382	0.01**
RM 1,000-RM 2,500	115	2.8409		
RM 2,501-RM 4,000	70	2.9669		
RM 4,001-RM 5,500	32	3.1208		
Above RM 5,500	11	3.0182		

Note: $1USD \approx RM\ 3.81$, N=244

TABLE 9. Descriptive statistics of students based on monthly income of parents

Monthly income	n	Gender		Location	
		Male	Female	Rural	Urban
Below RM 1,000	16	1.64%	8.20%	9.17%	4.76%
RM 1,000-RM 2,500	115	47.54%	46.99%	64.22%	30.95%
RM 2,501-RM 4,000	70	31.15%	27.87%	16.51%	40.48%
RM 4,001-RM 5,500	32	9.84%	14.21%	9.17%	15.87%
Above RM 5,500	11	9.84%	2.73%	9.17%	7.94%
	Total = 244	100%	100%	100%	100%

Note: $1USD \approx RM\ 3.81$, N=244

The ANOVA result in Table 8 suggests that at least one of the means of CGPA according to monthly income of parent is different. The significant F-value rejects the null hypothesis (significant F = 0.01**), which stated that there are no differences

between the means. In addition, the summary of means indicates that students from families of higher income levels perform better in their academic assessments (CGPA) as compared to those who come from families of lower income brackets (Table 8). Table 9 exhibits descriptive statistics of students based on monthly income of parents. Most students came from families in the income bracket of between RM 1,000 to RM 4,000. In addition most of the students from rural areas are from families with income bracket between RM 1,000 to RM 2,500 while most of the students from urban areas came from families with income bracket between RM 2,500-RM 4,000.

TABLE 10. ANOVA of CGPA by father's level of education

Father's level of education	Sum of Squares	df	Mean Square	F-value	Sig F
Between groups	0.557	5	0.111	0.652	0.660
Within Groups	38.403	225	0.171		

Table 11. The summary of means of CGPA according to level of education of father.

Level of Education	Sample Size	Mean CGPA	Standard Deviation
Primary Level	98	2.975	0.4285
Lower Certificate of Education (PMR)	30	2.946	0.5028
Malaysia Certificate of Education (SPM)	62	2.894	0.3555
Other Certificates	13	2.860	0.4160
Diploma	13	3.054	0.4362
Degrees and above	15	3.013	0.2916

In the structural equation modeling discussed earlier, we have highlighted the influences of levels of education of parent on CGPA. Now we would like to determine whether means of CGPA can be differentiated by categorical groups. To achieve this purpose, this study carried out ANOVA analyses to determine whether the means of academic achievement can be significantly differentiated according on the levels of education of parents. Table 10 and 12 exhibit the Anova result and analysis of means of CGPA by levels of education of father and mother. Statistical findings (non-significant F-values) however failed to show that the average academic achievement could be differentiated according to these categories. Nonetheless, the alternative propositions of our assumptions can be stated as follows:

H_{a2} : At least one of the means of CGPA according to level of education of father is not

equal.

H_{a3} : At least one of the means of CGPA according to level of education of mother is not

equal.

The significant critical test in the analysis of variance (ANOVA) cannot support the stated alternative hypotheses since the F- values are not significant (significant F = 0.660 and F = 0.083). The F-values do not allows us to reject the null hypotheses in favour of the alternative hypotheses which stated that means of CGPA according to level of education of father and mother are significantly different. Even though the means of CGPA cannot be differentiated according to levels of education of parent, the structural equation model exhibited earlier had strongly suggested that by itself levels of education

of parents have strong structural impact on CGPA. In addition, summaries of means in Table 11 and 13 explicitly indicated that students from well-educated families have slightly higher CGPA that their counterparts from families with lower levels of education.

TABLE 12. ANOVA of CGPA by mother's level of education

Mother's level of education	Sum of Squares	df	Mean Square	F-value	Sig F
Between groups	1.676	5	0.335	1.975	0.083
Within Groups	37.664	222	0.170		

Table 13. The summary of means of CGPA according to level of education of mother.

Level of Education	Sample Size	Mean CGPA	Standard Deviation
Primary Level	112	2.987	0.4627
Lower Certificate of Education (PMR)	34	2.966	0.4129
Malaysia Certificate of Education (SPM)	58	2.874	0.3184
Others Certificates	8	2.683	0.4173
Diploma	6	2.954	0.4006
Degrees and above	15	3.197	0.2291

Indeed, the statistical findings suggest that even though the means of CGPA cannot be differentiated by levels of education of parent, the summaries of means and the structural equation modeling is enough to highlight that education of parents have positive structural impact on academic achievements of business students in five major

universities in Malaysia. Therefore, we can safely conclude that family backgrounds have significant influence on academic achievement of business students in five major universities in Malaysia.

SUMMARY AND CONCLUSION

This study tries to highlight important factors contributing to high academic excellence. The findings indicate strong associations between academic achievements (CGPA) and positive attitudes towards learning, lecturer factors, past achievements in English and Mathematics and family background. These findings are consistent with studies carried out by Bloom (1976); Block (1983), Benbow et al. (1991) and McCallum & Demie (2001). In addition, students from urban areas and those from higher income brackets families have better CGPAs than their counterparts. Several other studies have also concluded similar findings (Benbow et al. 1991; and McCallum & Demie, 2001). Moreover, we believe that rich families from urban areas could provide more incentives, facilities and tuitions for their children to improve their academic results.

The researchers believe that this study contains useful findings for researchers, teachers and policy makers in Malaysia to understand what factors that have significant influences on academic excellence. The results may point to areas where further actions could enhance the learning process. Although this research is focused on business and management students in public universities in Malaysia, other types of institutions of higher learning can benefit from the findings. The benefits that would derive from improvement efforts in certain areas or policies would be beneficial to students especially

in universities. Finally, this study would provide a substantial theoretical contribution to teachings and learning development, especially in Malaysia.

As a summary, this paper concludes that:

(1)   There are significant correlations between positive learning attitudes, past achievements, family background and academic excellence.

(2)   There are significant differences in means of students' achievements according to families' home locations and income brackets of parent.

(3)   There is significant structural impact of family background on academic excellence.

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UNDERSTANDING FOREIGN STUDENTS' RESPONSE TO ESSAY TOPIC: A STUDY ON WRITTEN DISCOURSE ACCENT BASED ON TOPIC DEVELOPMENT.

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Abstract

This study is conducted in order to investigate written response given by foreign students at tertiary level in two institutions in Malaysia (UKM and Nilai College, Negeri Sembilan). The objective is to discover how students from different cultural backgrounds develop the identical topic in different ways based on their cultural and social experiences. The students were asked to write essays on the same topic and the essays were analysed in order to look at different styles and information based on their culture and social experiences. The result shows that the students followed the same pattern in responding to the topic given. However, the responses given by the students are found to be related to their cultural background and experience.

Introduction

According to Richards et. al (1985) accent in spoken discourse is a particular way of speaking which tells the listener something about the speaker's background. The field of English as a second language (ESL) has long recognized the concept of a spoken discourse accent that is caused by native speaker's lack of proficiency in one or more of the following areas : phonology, morphology, syntax, lexical choice or socio linguistic knowledge. It seems reasonable to assume that a similar phenomenon occurs in written discourse. However, written discourse accent is an area which is not explored much by researchers yet. Probably the best definition for written discourse accent is a particular

way of writing which tells the reader something about the writer's background. And written discourse accent may be due to the lack of native fluency in one or more areas of proficiency which includes grammar, word choice, cohesion, rhetorical organization and topic development. This study will explore the area of written accent in terms of topic development.

Literature Review

The ability to write a fluent, coherent text implies more than the ability to control vocabulary, syntax, and mechanics. In the past decade, researchers have come to recognize that textual organization, information retrieval, goal planning and attention to such influencing contextual factors such as topic, definition of audience and selection of discourse genre all represent necessary, but not sufficient, criteria for good writing (Grabe and Kaplan, 1989). In response to these perceptions, researchers have turned increasingly to experimental research and protocol analyses of writing process, descriptive case studies and ethnographic research, rhetorical analyses of discourse variation according to genre, topic and audience and text linguistic approaches to the analysis of the written product.

The effort to understand how writing in a second language (L2) is also influenced by the cultural and linguistic conventions of the writer's first language (L1) is now recognized as an important element which must be accounted for in any approach to L2 writing research and instruction.

The area of written discourse accent that has received a good deal of attention is that of culturally determined rhetorical patterns. The most well known proponent of this theory is Kaplan (1966) who argues that students from specific culture demonstrate typical patterns of organization. Based on a sample of essays, Kaplan (1966), hypothesized that English speakers, for example, prefer linearity in their written discourse while Arabic speakers prefer parallelism and Oriental speakers prefer indirection. However, Kaplan "traditional" contrastive rhetoric has been criticized for several reasons : for being too ethnocentric and privileging the writing of native English speakers (Matelene, 1985); for examining only L2 products and ignoring educational and developmental process variables (Mohan and Lo, 1985); for dismissing linguistic and cultural differences in writing related languages, that is, for including Chinese, Thai, and Korean speakers in one "Oriental" group (Hinds, 1983); and for considering transfer from first language a negative influence in second language writing (Raimes, 1991). Mohan and Lo (1985) and Wong (1985) criticize Kaplan's theory, particularly as it relates to Chinese writers of English. Mohan and Lo (1985) maintain that if researchers do fine indirectness in the papers of Chinese writers, the reasons may be several, among them the students' lack of familiarity with conventions of expository writing in their native language or with the assigned topic. Wong (1985) notes that such matters as digression, lack of paragraph unity, and indirectness are not the monopoly of foreign learners of English but also exist in the papers of basic writers who are unfamiliar with the conventions of written English.

The extent to which topic development may contribute to a discourse accent has not been widely investigated. Two previous studies that have addressed topic development as a factor of discourse accent are those by Scarcella (1983) and Hu, Brown, and Brown

(1982). Scarcella, in examining the informal spoken conversation of bilingual native speakers of Spanish and English, found that when Spanish speakers talked with other Spanish speakers they discussed topics of a far more personal nature than did English speakers. While all the Spanish conversations included discussions of family relationships, such talk was virtually absent in the English conversations. In other words, cultural background appeared to strongly affect which topics were acceptable for an informal conversation. Whereas Scarcella's work focused on a spoken discourse accent, Hu, Brown, and Brown (1982) investigated topic predictability in written discourse. In their study, thirty nine Chinese students who were majoring in English in China and sixty two Australian students at the University of New South Wales were asked to give short written answers in English to several questions. One of the questions was :

Pretend that you have a brother who does not work hard at school. What would you say to persuade him to work hard?

In responding to this question, both the Chinese and Australian students mentioned the importance of education to the individual. However, while the Chinese students frequently emphasized the importance of education for the nation as a whole, Australian students rarely mentioned this idea. Furthermore, in developing the essay, the Chinese students wrote response as if they were directly addressing their brother, using imperatives such as, "Try to make sense of your life and study hard at school". The Australian students, on the other hand, treated the brother as a third party and used tentative suggestions such as, "If he works hard, he may be as brainy as his big brother." In short, the Chinese and the Australian students approached the topic with different set

of cultural assumptions and role expectations. Hu, Brown, and Brown (1982) conclude that language use is essentially rooted in the reality of the culture, and they call for "close cooperation between native speaking and Chinese teachers of English to work out an approach which allows students in China to express their own experiences and knowledge in acceptable English" (p.40).

Subjects

32 respondents were involved in this study. They are international students from two institutions – Universiti Kebangsaan Malaysia and Nilai College doing courses like engineering, social science, Islamic studies, accounting and business administration. The students are from China (17), Vietnam (2), Indonesia (7), Iran (1), Bangladesh (3), Sudan (1) and India (1). These students are currently pursuing their studies from the first degree to the doctorate. The reason of choosing the international students is because in the last few years Malaysia has attracted foreign students to continue their studies here and English teachers, while teaching English they have to understand the culture that these students bring to class.

Purpose of Study

This study aims to find out how students from different cultural backgrounds develop the identical topic in different ways based on their cultural and social experiences.

Research Procedure

The students were asked to write an essay in response to the following topic :

You were waiting for a bus one evening. First, describe the scene, and then say what happened when it rained heavily.

The students were given an hour to complete the essay. The instructors who taught them collected the essays. The topic was selected mainly because the students are familiar with heavy raining situation as most of them are from Asia. The topic is open-ended which will allow students, if they wish, be inventive in their approach. Students from different parts of the world might have different experiences waiting for the bus. For example students from rural area in one country might have to wait for hours for the bus and when it begins to rain heavily they might have to run for shelter probably because the bus stop is without roof. When students from different background are asked to write, then, any number of scenarios could conceivably take place at the bus stop. Students were given an hour to write. There were no restriction when it comes to length and students were told not too worry about grammatical errors. The essays were analysed in order to look for the different styles and information based on their culture and social experiences.

Result of the study

To begin, most students described the reason for their bus trip. Three students indicated that they were going home from the university, four of them mentioned that they were

going home from work, three said they were going home after visiting friends and one said that he was going home after watching a football match. Most of them wrote that they did not have their own transport and that is why they had to take the bus.

Next the students described the situation before the rain. 12 students described the sky – dark sky and dark clouds in the sky.

The sky become darker and darker.
Suddenly the sky became dark.
I looked up the sky there are many black clouds.
Thick dark clouds were in the sky.

The students' focus on the natural setting reflect cultural appreciation of the natural surrounding.

Then, the students also described the beginning of the rainfall. Seven students wrote that the rain began suddenly although the topic did not suggest this. Perhaps the students described a sudden rainfall because rain and high humidity are common phenomena in summer throughout China and this is also familiar situation in other parts of Asia.

After the rainfall nineteen of the students described the reaction of the crowds at the bus stop when it starts to rain :

Most people did not want to be wet, they ran to the store or restaurant.

(This could not happen in the Western countries where people could just run for shelter in a restaurant. The restaurants in Asia could be a prestigious one or open one where sometimes people do not really eat there but they used the seats to wait for friends, read newspapesr or shelter themselves from the rain).

Lots of people run into the bus station .... Some people didn't run to the station ... they all ran into the shops.

I started to run around a tree beside the bus stop.

I quickly went to a big tree.

All the people who standing outside of the shade were running here and there for shelter.

Many people ran quickly away from the bus stop for shelter.

People who carry umbrella immediately opened their umbrella. Those people who did not carry umbrellas along with them started to run towards the shelter.

Next, thirty-one students mentioned that they did not bring umbrella with them. Only one student wrote that he has an umbrella " Though I was under the shade of the bus stop yet the rain forced me to open my umbrella". And fourteen students described the condition of themselves as they did not bring umbrella with them and the rain was very heavy :

My clothes had a little wet because I stayed on the pavement.

I completely got wet.

I started getting wet. Firstly, were my feet. Secondly, were my legs, my hands, and all my body got wet.

I stood with everything wet.

I felt very cold and wet.

I felt cold.

I feel very bad, the water fall on my whole body, my hair was wet and my clothes also. I feel very cold.

I was so wet and was shaking with cold.

After a few minutes I saw myself as a man who just up from a pond after completing his bath.

My T-shirt and the bottom portion of my pants were so wet that I was shivering with cold.

One student described the flood caused by the heavy rain. The "flash" flood is common especially in the cities in Asia especially in Kuala Lumpur.

The drain started to overflow with rain water. The water was overflowing across the road.

And then three students described the opposite attitudes of the passers by in their cars :

A lot of cars were passing by but no one stopped to give us a lift.

A pretty woman drove the car. She opened the window, and asked me to get in. It was warm inside the car. I thanked her and let her drove me home.

The kind driver took me home.

Four students described road accidents caused by the heavy rain as the drivers were unable to see clearly:

Suddenly I heard a sharp sound. ... I found a boy lie on the road. He was full of blood.

Suddenly I saw a man with a stick in his hand fell down an a car hit him.

Then I noticed that the car has striked an old woman.

Suddenly the girl rushed into the rain. At the same time I saw was driving towards her.

Later, I heard the girl died.

One student from China described how the crowd rushed into the bus to get a seat. This description fit with what is written by Kaplan and deKeijzer (1984) in their guide to China, since buses are very crowded in China, " a deceptively peaceful queue is often found waiting a the stop, but once the bus arrives, the line often degenerates into a chaotic rush toward the door" (p. 113).

The bus was coming every body rushed into the bus to get their seat. That is the true picture everywhere at the bus stop.

Most students (19) finished their essays by describing the arrival of the bus. Some of them expressed their relief when they saw the bus.

The bus came from Kuala Lumpur. And then we climbed the bus.

After an hour the bus came , then I went home.

After a long time the bus arrived I got in and came to my house.

Eventually the bus came and the driver provided reasonable excuse mentioning the traffic jam …

With the arrival of the bus, there was a break to my continuous thoughts with regards to rain.

I waited for another half an hour and at last the bus came.

Apart from responding just to the topic one student from India went down to his memory lane writing relating rain with his hometown Bombay in India. He described that rain is not a nuisance but something that he enjoyed watching from his balcony.   He also described the scenery of a rainy day when people use colourful umbrellas with them walking in the street:

It reminds me the period when I used to stay in Bombay, India. In Bombay during the rainy season the rain can be anticipated any time. It may be a hot day a few minutes earlier and it will start to rain suddenly. And again the weather shall be fine after a short period. All men and women, boys and girls carry umbrellas while traveling in the city of Bombay. If it starts to rain everybody open their umbrellas. Every where we can observe various colours of umbrellas. If someone look from the top, from his balcony, he

can see thickly populated umbrellas occupied the street. And umbrellas moving along the street colliding gently with each other.

And then he continued with the description of watching the rainfall from his balcony:

I enjoy watching the rain from my balcony when I am in leisurely standing in my balcony during my free time. It really gives me pleasure to watch the rain water falling from the sky. These drops will join together to become a run-off. And this run-off will flow on the ground.

Later the student continued mentioning the pleasure of having the first rain after a long hot summer.

In India after very hot summer the rainy season arrives in June every year. If we are standing near the open ground on the first day of rain, we feel that the earth was thirsty and the drops of rain quenching its thirst. For the children the first rain of the year is an interesting event. They would enjoy wetting themselves playing in the rain.

The description given by the student above is very much related to the culture of India specifically and other Asian culture generally. From the Hindi movies we can see that the Indian really enjoy themselves in the rain – they would sing and dance in the rain which is sometimes a must in most Indian movies.

Another student who is from China described that he enjoyed standing in the rain without trying to find a shelter for himself:

Suddenly it rains. First, it's lightly. I felt good. Then the rain became heavily and heavily. I still stood in the rain because I felt relaxed, happy and never better.

Usually, after a hot and humid weather it would be nice to have a shower under the rain. However, this will not happen in the cold climate countries as the rain will cause you pneumonia.

Next a student from Vietnam described what rain means to the people:

Rain is so important to people because it makes the plants grow. People will have their food. Sometimes rain can also be bad – it will make flood.

For people from Vietnam rain is very important because their economic is based on agriculture. If they do not get enough rain then even the economy of the country will be affected and people will be starving. The situation would be different for countries that do not rely so much on agriculture like most developed countries.

Overall the students followed the same pattern in responding to the topic given. Most students started the introduction with the reason for taking the bus, followed by the description of the scenery at the bus stop, description about the sky and the cloud, description of the situation when it started to rain and finally the conclusion – the arrival

of the bus. The description given by the students are related to their background and experience – the situation of heavy rain from their own perspective from where they come from.

Conclusion

If, as these essays suggest, topic development is largely a factor of cultural experience, then composition teachers need to consider several factors in the teaching of writing. First we need to give careful consideration to the selection of writing topics. As Raimes (1984) puts it, " choosing topics should be the teachers' most responsible activity" (p. 7). We must be certain that the topics we assign do not require students to relate experiences they do not have.   For example, the topic given about the heavy rainfall is familiar for the students who come from Asia, who experience this situation every monsoon season. However, this is not so in some parts of the world for example it might rain everyday in Scotland but they do not experience heavy monsoon rain. Then the students might not be able to visualize what actually happen when it rain heavily. And students might not be able to write on the topic of the bus stop because they so infrequently travel on a bus; therefore, they will know how to develop the topic. As we are getting many foreign students doing their tertiary education here in Malaysia then it is important for the writing teachers to assign topics familiar to them. It is also important for teachers to understand the way different students from different parts of the world respond to the topic given.

In reading essays, teachers need to determine which aspects of the essays are not keeping with their own social and cultural experiences and thus contribute to a written discourse

accent. An essay written by a foreign student is likely to lack proficiency in several areas – grammatical accuracy, lexical selection, cohesive patterns, rhetorical organization, and topic development. Hence it is difficult to determine to what extent the manner in which the topic development is contributing to a written discourse accent.

The question of just what part social and cultural experiences play in a writer's development of a topic is an area that needs further research. However, the result of this study demonstrates, what students write is clearly influenced by their cultural, social, and educational experiences. For composition teachers this means we need to select topics that are within the realm of those students' experiences, and then strive to become aware of our own cultural expectations about the development of the topics we assign. If we approach our lessons in this way, not only will we help our students have something to write about but we will also have an opportunity to further explore how social and cultural differences affect the manner in which a writer approaches a specific topic.

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COLLABORATION IN SECOND LANGUAGE LEARNING

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Collaboration in teaching and learning is one of the ideas which educators should be promoting as it has the potential to bring about positive outcomes for both the teachers and students. One of approaches to promote collaboration in teaching and learning is the use of learning in small groups. In a teaching and learning context, learning in groups is quite a common practice adopted by many teachers. As a pedagogy, collaborative learning involves the entire spectrum of learning activities in which group of students work together in or out of class. It can be as simple as working together in pairs to the more formally structured process known as cooperative learning which has been advocated by Johnson, Johnson and Holubec (1993). This paper aims to assess students' perceptions toward participating in group work in general and collaborative learning in particular. Subjects for the study are a group of Form Two students. A four scale Likert-type questionnaire will be used to collect data for the study. The findings of the study will raise the students' awareness of the potential benefits of using small group in collaborative learning as a prominent technique in their second language learning context.

Introduction

What is collaborative learning? Collaborative learning is more than a classroom technique. The underlying premise of collaborative learning is based upon consensus building through cooperation by group members which is in contrast to competition. It suggests a way of dealing with people which respects and highlights individual group members' abilities and contributions in situations where people come together in groups. Collaborative learning is an instructional approach in which students work together in small groups to accomplish a common learning goal. As a pedagogy, collaborative learning involves the entire spectrum of learning activities in which groups of students work together in or out of class. It could be in the form of a simple and informal pair work whereby students discuss their ideas with another student to form a consensus answer and then share their results with the entire class. Collaborative learning is not the same as traditional group work. Most of the collaborative learning models follow certain principles such as, the need to structure positive interdependence, individual accountability and providing interpersonal and cooperative skill building to the students. There are many different models of collaborative learning which are currently being used in education. Some examples of these models are The Structural Approach (Kagan, 1989), Learning Together (Johnson, Johnson and Holubec, 1987), Group Investigation (Sharan and Sharan, 1976) and Students Teams Achievement Divisions, (Slavin, 1978). These models emphasize more on the formally structured concept of collaborative learning which is referred to as cooperative learning. Cooperative learning emphasizes

the social nature of learning and the need to train students how to work collaboratively in order to resolve conflicts, interact appropriately and actively involve all group members.

Literature Review

A large body of research over the last twenty years suggests that classroom collaboration among students is associated with enhanced outcomes on a number of variables such as achievement, thinking skills, inter-ethnic relations, liking for school and self-esteem (Bossert, 1988-1989; Cohen, 1994; Johnson and Johnson, 1989; Sharan, 1980 and Slavin, 1995). Research studies have supported the idea that collaborative learning is one of the most effective forms of learning (Johnson & Johnson, 1984).

Collaborative learning is also considered to an important teaching technique in second language learning context. By working collaboratively, students who are shy, not proficient or confident in the second language will be able to obtain some guidance, practice and even friendly feedback from their group members. Jacob, Rottenberg, Patrick and Wheeler (1996) explore the use of Learning Together in influencing opportunities for acquiring academic English amongst second language students in a sixth grade social studies classroom. The result shows that Learning Together has given a wide range of opportunities to students to acquire academic English such as receiving help with difficult academic terms and concepts and the conventions of written English. Gordon et al. (1997) as cited in Kennett et al. (1999) conducted a study of university perceptions of the benefits of small group learning. The students believe that when they work collaboratively, they are able to increase their listening skills, knowledge of the

topic area, motivation and retention of information learned in a group and gain exposure to different ways of thinking. The students in Tengku Nor Rizan's (2000) study also found that they can understand academic reading articles in a class assignment better when they work collaboratively. These studies and anecdotal experiences reported by teachers and researchers illustrate the overwhelming favor towards the collaborative learning paradigm as one of the approaches in teaching and learning.

Methodology

Thirty –seven Form Two students from a rural school are selected to be the subjects for this study. These group of students represents one of Form Two classrooms, whose previous academic performance is at an average level and that they have already been exposed to group work. To a certain extent, these students will be able to draw from their previous academic experiences when they respond to the questionnaire.

A four scale Likert-type questionnaire is used to collect data for the study. The questionnaire has been adapted from the Johnson and Johnson, Classroom Life Script. The questionnaire has also been translated into Bahasa Malaysia so as to ensure that the English proficiency of the students will not affect the responses given. For this study, students have to respond to 78 statements which reflected the 12 categories selected. The twelve categories are selected as they represent the main components of collaborative learning. In each category, between 6-11 items are given to the students to respond to. The categories are:

Cooperation

Goal Interdependence

Resource Interdependence

Extrinsic Motivation and Social Support

Cohesion

Academic Self-Esteem

Fairness of Grading

Valuing Heterogeneity

Academic Learning Outcome

Social learning Outcome

Attitude

Effective Group Interaction

The responses from the questionnaires are analyzed using frequency count and then later transformed into percentages.

Results

The results of the questionnaires will be discussed according to each category and the overall interpretation will be included at the end of this section. Generally, most of the subjects indicate that they are in favour of collaborative learning.

In the cooperation category, all the eleven items indicate that the students are in favour of learning collaboratively. This can be seen in the percentages of the agreed

responses. 75 – 100% of the students agree that they like learning and helping one another in their English classes. 93% indicate that helping one another in the class is a good idea and 94% indicate that they can learn a lot of important things when they work collaboratively.

In the goal interdependence category, 85% agree that they try to ensure that everyone in the group learn the assigned material. 61% agree that they should get the same grade when working together while 62% agree that the grade they earn should depend on the group members' contribution. Some of the students disagree with the similar grades to all members in the group because they may find that not all members contribute their portion of the group work equally. Next, more than 80% agree that they have to make sure that all members in the group understand and complete the task if they want to do well on the assignment. Nevertheless, when it comes to completing the task, the students are equally divided (50% agree and 50% disagree) whether they consider that the task is completed once all the members in the group complete the assignment. In this category, the students are still wary about their joint outcomes and ensuring that all group members will do their share for the assignment.

The third category is resource interdependence that refers to the sharing of materials, dividing their tasks and breaking up the materials. 53% agree that their assignment cannot be completed unless everyone contributes their share. 85 - 97% agree that the teacher should divide the materials in such a way in order for everyone to be responsible for a certain portion so that all the members will do take the assigned task seriously and ensure that the group work is a success. To a certain extent, the responses

illustrate that the teacher still plays an important role as the manager of the class to ensure that all the students are taking part in their learning.

The questionnaire also elicit responses pertaining to extrinsic motivation and social support in the classroom. 72 - 77% agree that they do the assignment as it is part of the course requirement, make their parents happy and eventually obtain good grades at the end of the year. However, only 53% are motivated to do their assignment to please their teacher. 67 - 80% disagree that they are motivated to do the task in order to please their classmates. Thus, this indicates that the students are more instrumentally motivated ie. to obtain good grades rather than sustaining the teacher' and students social support.

The next category requires the students to respond to the idea of class cohesion. Between 61 – 80% agree that are friends and like each other in the classroom. Nevertheless, 72% indicate that some of the students in the class are difficult to work with. This shows that class cohesion can be achieved because the students get on well with one another and that collaborative learning can be implemented despite the resistance from those students who may not be easy to work with. From these responses, the teacher concerned must be able to facilitate the group work by making sure that those difficult ones are distributed to various other groups. By doing so, the teacher is also able to implicitly break-up the difficult group and enable them to learn and work in a functional and effective group.

In the following category which is academic self-esteem, 61 - 72% agree that they are not satisfied with the class achievement and that the class tasks are fairly easy.

This is because the students themselves are a better group in terms of their academic achievements and that more than 81% agree that they are coping well and getting good grades in the class. This is evident when 81% disagree to the idea that they lack confidence in passing their class test. Generally, it can be said that these students have high academic self-esteem because they have the confidence and ability to perform well in the class.

In terms of grading, all the students agree that everyone has an equal chance of being successful in their class if they work hard for it. More than 80% agree that they deserve the grades they get in the class. When asked whether the scoring system in the class is not fair, more than 58% disagree with the statement. 64% also disagree that the group members did not do their fair share of work for the class tasks and assignment. Based on these responses, it can be said that the grading system applied in these students' collaborative work is satisfactory and that they consider the group members' contribution to the assignment is fair.

The following category requires the students to respond whether they prefer to work with members who are similar or different to them. 64% agree that they learn more from students who are both similar and different from them. This is to say that the students value the heterogeneity and that they are able to draw from each other's ideas, skills and knowledge.

As for the academic learning outcome category, 81% agree that they get better grades when they work collaboratively. 80 – 88% agree that they can understand the

task better and finish it faster when working in groups. This shows that working collaboratively can be an effective way of learning for the students, given the appropriate situation. For the social learning outcome, 62% agree that it is easier to talk to other members in the class. 73% find that they like the other students in the group and 87% would like to help other students. At the same time, 86% feel that they can get to know the classmates better when working collaboratively. Collaborative learning has a place in classroom setting based on the responses from the students that   67 - 75% disagree with the statements that state that the rest of the students do not want to listen to them or cannot get along well in the group.

When it comes to attitude, 77 –79% state that they enjoy working and discussing with other students collaboratively. In fact, 86% considered the class to be more interesting and not boring when they work in group. In this case, it can be seen that collaboration in learning can improve the attitude of the students and also classroom atmosphere more positively.

The final category is the effective group interaction. Between 73 – 90% indicate positively towards group interaction such as dividing their task equally, helping to complete the assigned task, listening to each others' opinion, giving praises to one another for the success of the work and trying to do the best in the group work. However the noise problem when the students work collaboratively is inevitable as 86% agree that the class teacher asks them to keep their voices low. When ask whether they make any digressions unrelated to the assigned task, 72% disagree with the statement. They also disagree (66%) with the statement that they face problem in completing their task when

working in group. In other words, collaboration in learning is regarded positively by these students as the advantages outweigh the disadvantages.

Conclusion

The results of this preliminary study indicate that more students like to work collaboratively. In terms of cooperation, most of the students agree that it can enhance their learning abilities. The students also perceive that goal interdependence will enable them to obtain better grades and that the members will benefit from learning from one another. As for resource interdependence, most of the students agree that sharing materials, ideas and responsibilities can lead to success. Students can also be extrinsically motivated when they are able to obtain better grades. At the same time these students know that they have the social support of their peers, teachers and parents. Morever, the cohesiveness of the class will improve when students are able to work well and get to know one another better while working collaboratively. Most of the students feel that they are confident and happy working collaboratively. When they feel that they can do well in their class, their academic self-esteem will also be increased. The students are also comfortable with the grading system as they know that they have equal chance of being successful if they work hard for it. Based on their responses, one can see that students are comfortable working collaboratively with others students who are either similar or different from them. As for the learning outcomes, academically, the students will gain tremendously when they are able to do the task well, complete it faster and get better grades. Socially, they will be able to get to know their classmates better and improve their interpersonal skills through their communication while working collaboratively. When a student likes his classmates, enjoy working together and have

fun doing the assignment, that student's attitude will also become more positive. Every teacher knows that attitude plays an important role in the success or failure of a student's learning outcomes. Working collaboratively can also facilitate effective group interaction. Once a student is comfortable in the learning group, he will be able to interact without feeling inhibited. Mistakes among friends are considered part of the learning experience. Collaborative learning has a place in pedagogy and a good teacher should not miss this opportunity to use it as one of the regular methods of teaching. However, collaboration in classroom should also be used and monitored carefully as it can also get out of hand. It is our hope that this preliminary study will raise the students and teachers awareness of the potential benefits of using it as a prominent technique in the learning context, specifically, second language learning.

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REENGINEERING TECHNICAL AND VOCATIONAL EDUCATION IN MALAYSIA

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Abstract

Global economy requires global competencies. To be successful in the global market place, each country has to define its pathway especially in terms of its future workforce competitiveness. In Malaysia, technical and vocational education and training is accorded a high priority in the nation's industrialization agenda. With the vision of becoming an industrialized nation in 2020, Malaysia must prepare a well-educated, skilled and competitive workforce. Thus, the government has placed human resource development as a major emphasis and a strategic policy to enhance Malaysia's competitive edge over other developing countries. In the era of globalization and k-economy, the future of Malaysia's competitiveness depends on the skills of its workforce. Therefore, it is critical to assess the impact of globalization and "reengineer" the technical-vocational education and training systems in Malaysia. The impact of globalization and k-economy has led to a heightened awareness of the need to reengineer and reform the technical-vocational and training systems.

Introduction

Vocational education in Malaysia was introduced by the British in 1897 to train Malay youths as mechanics or fitters to manage the railway lines (Federation of Malaya, 1956). However, it was not until 1906 when the first public technical school was opened to train technicians for public works that vocational training began to have an impact (Lourdesamy, 1972). In 1926, the first trade school was opened in Kuala Lumpur, marking the beginning of public vocational education in Malaysia (Ministry of Education, 1967). The trade schools offered courses for fitters, electricians, carpenters, brick-layers, and tailors. In 1947, Junior Technical Trade Schools were established to provide a three-year course in machine shop practices, electrical installation, motor engineering, carpentry, bricklaying, and cabinet-making (Ministry of Education, 1967).

The period 1961-1965 was a transition period, when a number of changes were being introduced to adapt the education system to meet the needs of a rapidly developing nation. Following the recommendations of the Education Review Committee in 1960, the trade schools which provided two-year courses were converted into Rural Trade Schools offering apprenticeship programs for rural Malay youths who had completed six years of elementary education (Ministry of Education, 1967).

A major change in the vocational education program was in 1965 when the comprehensive education system was introduced. The new system that raise the school-leaving age to 15 was designed specifically to change the form and content of secondary level education, which would offer a greatly expanded and more diversified range of courses. Students would receive general education with a vocational or technical emphasis on industrial arts (woodwork, metalwork, electricity, and power mechanics), agriculture science, commercial studies, and home science (Kee, 1973; Lourdesamy, 1972; Ministry of Education, 1967).

In 1987, a new vocational education system was introduced. Under this system, vocational students had the choice either to enroll in a vocational or skills training program. A vocational education program requires the students to take the Malaysian Certificate of Vocational Education (MCVE) examination at the end of the two-year program. Students who opt for the skills training program must take the National Industrial Training and Trade Certification Board (NITTCB) examination at the end of the two-year training period. The NITTCB was created by the National Advisory Council of Industrial Training to provide common trade standards and to improve the training institutions throughout the country. The goal of the vocational education program in Malaysia was to provide education and training to individuals for specific occupations. The objectives of the vocational education system as outlined by the Ministry of Education (1988) were as follows:

- to provide the industrial and commercial sectors with manpower equipped with basic skills and knowledge,
- to provide a flexible and broad-based curriculum to meet not only the immediate needs but also future needs and changes in industries,
- to provide basic education in science, mathematics, and languages to enable students to adapt themselves to new methods of work and achieve greater proficiency in their future work, and
- to provide the foundation for skills and knowledge on which to build subsequent education and training.

In the vocational track, emphasis is on basic academic and technical subjects with the purpose of providing students a better foundation should they decide to continue their higher education in technical colleges or polytechnics without affecting vocational skills development at the present level. In the skills training track, students are provided more time and emphasis on skills training and development as required by industry. Upon conclusion of the skills course, the student takes the NITTCB examination. Opportunities are offered to these students to continue the advanced and specialized training after completing the two-year basic skills training program. Completers of the skills training program will most likely enter the job-market immediately after graduation.

Continued efforts have been directed toward expanding the supply of skilled and semi-skilled workers through increased enrollment in the secondary technical and vocational schools. In 1995, there were 9 secondary technical schools and 69 secondary vocational schools compared to 58 secondary vocational schools in 1990. The enrollment in these schools increased from 30,940 in 1990 to 48,800 in 1995, while the output was 13,500 for secondary technical schools and 82,700 for secondary vocational schools for the 5-year period (Economic Planning Unit, 1996). The majority of the graduates from secondary technical schools continued their studies in various post-secondary institutions, while the graduates from vocational and skill programs were mainly integrated into the work force.

In mid-1990s, the Ministry of Education has made a dramatic move to upgrade technical education, not only because of the requirements of the economy but also to increase more science and technical human resource (Economic Planning Unit, 1996). In this regard, 22 secondary vocational schools were converted into secondary technical schools for the 1996 school session. In 2000, the conversion increases technical schools to 77 and reduces vocational schools to 4 (Malaysian Educational Statistics, 2000). At the same time, engineering technology and technical drawing subjects were also introduced in selected academic secondary schools. The move was to open up opportunities for academic students who inclined to be in technical areas as well as to prepare them to continue their studies in various science and technical-related disciplines at the post-secondary level (Economic Planning Unit, 1996). However, this conversion was criticized by vocational educators who perceived that the shift would severely restrict the future supply of blue-collar skilled workers that are already in severe shortage (Abdul Raof, 1996).

New Reform Initiatives

Invention Curriculum

In the wake of the country's effort to emerge as a fully developed industrialized country in the year 2020, Malaysia has placed paramount importance in science and technology with a particular emphasis on technological innovation. In line with government's initiative, the Ministry of Education has introduced a new elective subject "Invention" in 1995 at the upper secondary level in academic schools (Ahmad Mohamad Sharif, 2000). Basically, the subject aims at inculcating elements of creativity and innovation among students through producing an artifact or prototype that carries originality and commercial values. Conceptually, "invention" is a blend of three major elements, namely Head, Hand, and Heart or the 3H's that requires students to transform their abstract, creative minds into useful products using scientific and problem-solving skills. Elements of curiosity, patience, perseverance to name a few, are some of the work attitudes and values embedded in this subject.

Multimedia Super Corridor (MSC) and the Smart School Project

Due to the increasing demand for knowledge workers to work in the IT and high-tech industries of the MSC, Smart Schools program was adopted as one of the 7 Flagship applications. The flagships were designed to support the government's plan to obtain the status of an industrialized nation by the year 2020 and to gain a competitive edge over other developing countries in the global economy (Abd. Halim Mohamed et al, 1999). To achieve these targets, the government has already taken the initiative of introducing Smart School project that was launched during the review of the Seventh Malaysia Plan (1996-2000). The objective of the project is to produce a new generation of IT-literate Malaysians who are creative and innovative, adept with new technologies and able to access and manage information to enhance the competitiveness and productivity of the economy. In the Smart School concept, learning will be self-directed, individually-paced, contextualized and reflective using IT as a prime enabler (Nurhizan Abdul Manab & Azman Othman, 1999). It is hoped that, eventually, all schools in this country will be smart schools.

Nevertheless, Information Technology presents many challenges to the education system. At the school level, especially in public school system, the infrastructure and the facilities for computer and the Internet are still at the minimal level (Lukman Ismail, 2000). A study by the National Information

Technology Council (2000) which highlighted that a total of 5,010 or 69.5 percent of primary and 758 or 46.2 percent of secondary schools do not have computer facilities. A total of 6,478 or 89.8 percent of primary and 1,082 of secondary schools do not have Internet access. Furthermore, about 276,000 households constituting 1.2 million Malaysians are considered as "marginalized" when it comes to access to information technology.

Contextual Learning

In mid 1990s, the Technical Education Department of the Ministry of Education has introduced Technology-Preparation program or regularly known as *Tech-Prep* in technical and vocational schools. The purpose of *Tech-prep* is to teach difficult subjects such as science and mathematics to technical students using contextual approach. The *Tech-Prep* model also consists of school-based, work-based and connecting activities. Contextual learning is embedded in *Tech-Prep*. To teach contextually is to put learning in the context of real-world activities and problems and to position learners as thinkers and problem-solvers (Hull, 1999). To teach contextually is to use a variety of strategies to reach the many different types of learners. In contextual learning, emphasis shifts from learning a narrow body of knowledge or a narrow set of skills to learning how to learn. Contextual learning emphasizes the way that knowledge is embedded and applied in real-world activities, including the world of work. In short, a contextual learning approach gives meaning and depth to learning.

School-to-Work

Even though, no formalized School-to-Work systems have been established in Malaysia, the high-level leadership in the educational domain is considering a plan for the development of comprehensive lifelong education that is connected to the world of work. This is evident by the statement from Hussein Ahmad, former Director of Technical and Vocational Education (TAVED), Ministry of Education. He asserts:

> In line with the concept of lifelong education, Malaysia has, besides providing the students with skills for immediate gainful employment, also included academic subjects in all technical and vocational education programmes. The system has an open and flexible structure which takes into account the individual's educational needs and the requirements of occupations and jobs (Ahmad, 1994, p.58).

The major factor that could seriously inhibit Malaysia's plan to industrialize is the inability of the school system to graduate enough students with technical competencies to enter the future high-tech labor market (Abdullah, 1996). According the Eighth Malaysia Plan (2001 – 2005), professional and technical workforce will increase at the rate of 5.2 percent annually. For the 5-year period, about 227,900 new jobs in that category will be created or 17.9 percent of the overall new job openings. During that period also, the demand for engineers and technicians will reach 61,030 and 143,220 respectively, especially in the areas of electrical and electronics, mechanical, civil, and chemical engineering.

To deal with the shortage of workers in S & T areas, education and training at the secondary and post-secondary levels must be restructured and expanded, particularly, in science and technology.

Although the government has targeted the 60:40 ratio for students' enrollment in science versus arts, respectively, the pattern of school enrollment during the past 15 years has shown a reverse trend (Abdullah, 1996). The enrollment of students in science in public high school has decreased from 30.37 percent in 1981 to 18.61 percent in 1995. In absolute number, the enrollment rate in science decreased from 99,843 in 1986 to 87,378 in 1995 (Abdullah, 1996). However, there is a four-fold increase of enrollment in vocational education from 13,287 in 1981 to 61,182 in 1995. The increased participation rate in the vocational education is due to the aggressive policy actions and facility expansions during that period which reflect a growing interest among the government and the community at large to find an alternative education option besides the traditional academic college-prep track.

At present, five educational "tracks" are being enforced in public secondary schools in Malaysia. The tracks and their 1995 enrollment percentage (in bracket) are as follows: Arts (64.5%), Science (19%), Technical (1.2%), Vocational (13%), and Skills Training (2.3%). In terms of international comparison, enrollment in vocational and technical education in Malaysia is still low as compared to other countries such as Taiwan (67.2 %), France (22.2 %), and Korea (18.1%) (Wu, 1996).

School-Business Partnership

With knowledge replacing physical and natural resources as the key ingredient   in economic development,   education system and human resource development policies must be given due priority. The approach to human resource development must be balance and holistic. There must be genuine smart partnership between government ministries,   especially the Human Resource and Education Ministries,   and between the private and public sectors to strategies and   implement a human resource policy that is directed towards   fulfilling the objectives of a k-economy (Badawi, 2000).   A number of medium and large companies in Malaysia have participated in partnership with a number of public technical schools and institutions and skills centers to help to train students (Ahmad, 1994). The companies provided the equipment and supplied the high-level technical instructors, who work together with the center instructors. The synergistic relationship has been beneficial for both parties. However, the number of partnerships is still at the minimal level.

Other Reforms Initiatives

Other reforms initiatives include *Time Sector Privatization* (TSP), the establishment of advisory council, the use of expertise from industrial sector, school-community and school-business collaborations and partnerships among others.

Critical Issues in Technical and Vocational Education in Malaysia

Technical and vocational education in Malaysia has its own history and legacy. During the colonial period, technical and vocational education in Malaysia had focused on agriculture and manual skills. After independence, the new government continued to upgrade technical and vocational education

and as a result, several new initiatives were drafted and implemented. The beginning of the new millennium has brought several interesting and challenging development in the technical and vocational education in Malaysia. Several critical issues need to be addressed (Muhamad Rashid Rajudin, 2001).

Firstly, the under-supply of technical instructors may pose a problem to newly established community colleges and technical universities. Secondly, the minimal involvement of the local industries in the technical and vocational education programs may create mismatch between institutional training and what the industries really want. The industries' active participation is needed in the National Vocational Training Council (Ministry of Human Resources) to determine the trade standards certification (Malaysian Skills Certificate) and the syllabi for industrial training. For example, Germany has a very strong industrial participation in technical and vocational program. Partnership may include activities from the implementation of the course to using the experts from industries as guest lecturers and tutors. Thirdly, Malaysia has always been a 'user of technology', i.e., using the existing technology in solving problems. This paradigm has to be changed to 'contributor to technology'. With the changing of this paradigm, several new courses are being introduced into the program. "Invention" is a new subject taught in the schools today. With the basic technical skills that the students have gained, creativity is just an additional skill that they need in this new subject. Surprisingly, in few instances, the students have showed outstanding innovative projects that have won several awards both locally and internationally. Thus, with the introduction of this new subject, Malaysia will hopefully be a country that produces new technology to the world. Finally, the gender issue is prevalent in higher learning institutions and in the technical and vocational education training programs. Students in higher learning institutions in Malaysia are dominated by the females. Teacher in schools too is becoming a female dominated profession. However, male school leavers are more interested in enrolling into the technical and vocational programs, because of the excellent job opportunity after graduation. Several programs that will attract females into the technical and vocational programs should be introduced.

Conclusion

The vocational and technical education in Malaysia needs to be constantly reviewed. A migration into a knowledge-based economy is indeed imperative to bring the country to the level where it can compete efficiently in the new global force. To remain competitive, a critical mass of creative and innovative potential is needed. However, Malaysia currently lacks some of the critical elements to support the k-economy. Among them are the lack of adequate knowledge and skilled human resources, inadequacy of a k-economy and ICT infrastructure, relatively low R&D capability, relatively weak science and technology base, and lack of inventors and technopreneurs. The new reform agenda in S & T including the introduction of "Invention" subject that requires students to transform their abstract, creative minds into useful products using scientific and problem-solving skills. Viable strategies must be devised to attract more students to take S & T subjects and incentives and recognitions should be given to those who excelled in S & T areas. The smart schools seem to hold promise to produce new generation of IT-literate. New ways of teaching and learning through contextual and IT-based approach that take into account the students learning styles have been introduced. Nevertheless, the government should seriously examine the present orientation of Malaysian school system which is very much exam-oriented and focuses on academic achievement and indirectly suppresses creativity and innovations. Lofty goals of our education policy may not be realized if the implementation is patchy and inconsistent. The syndrome of "jumping into the bandwagon" should be minimized. A thorough study should be carried out before any new policy or subject is introduced in the schools. Malaysia should focus on a viable "niche" rather than try to "accommodate" any new trend that is passing by. The creation of quality human resources is important in k-economy. Knowledge workers are versatile, autonomous, creative and Highly skilled. Finally, there must be genuine and smart partnership between government ministries,

especially the Human Resource and Education Ministries, and between the private and public sectors to plan strategies and implement a human resource policy that is directed towards realizing the Vision 2020.

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THEME 2: EMERGING TECHNOLOGIES AND PEDAGOGICAL PRACTISES

TEACHING & LEARNING VIA A PROTOTYPE ONLINE DISCUSSION BOAR A CASE STUDY

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Abstract

University students have often complained of the lack of opportunities to have more contact hours with their lecturers to learn and/or discuss their academic problems or to seek consultation on matters pertaining to their course of study. Lecturers, on the other hand, are equally busy with their overwhelming numbers of students, research work, administrative work, etc. to be able to counsel and assist their students. How can this problem be resolved? Is there a better way where both parties, the students and their teachers, can learn, and interact without the constraint of space, time and availability? This paper presents the preliminary findings of a qualitative study on the use of a prototype Online Discussion Board to generate more discussion time on an academic course. The study involved a group of B.Ed TESL students at Universiti Malaysia Sabah to participate in online conferencing on various topics related to the course of study. At the end of the study it was found that all the participants enjoyed the learning and were greatly encouraged by the ease of use, flexibility and practical opportunity to learn and discuss via online discussion.

Introduction

Why introduce online tutorial strategies in campus-based courses? The impetus to use online discussion board as an alternative tutorial mode stems from the authors experience and observation as lecturers in the School of Education & Social Development (SESD) at Universiti Malaysia Sabah (UMS). In particular, it is increasingly apparent that a sizeable number of 'full time' students were not actually studying full time. Between family

obligations and other life commitments, most of SESD's students were involved in a precarious juggling act which left little time for conventional student life of study and recreation centred on campus. This has impacted on teaching and learning outcomes in some ways:

- Expectations of the level of student reading and preparation for tutorials and assignments were rarely fulfilled

- Little sense of community existed amongst the class as students spent most of their time off campus and in non-study pursuits

SESD has a relatively high proportion of mature age students. Given SESD's student profile, it is likely that 'full-time but really part-time' students are more numerous and noticeable than in other areas of the university's teaching. In terms of providing a quality teaching and learning environment for both the students and teaching staff, there is a need to respond to these changes in ways which can address the educational issues involved within a context of increasing academic work loads.

Traditional solutions such as holding tutorials across a broader spectrum of the day or having extended tutorial hours seemed burdensome to both the students and lecturers. Students need flexibility not just in teaching delivery but also in learning; teaching staff do not need additional contact hours in already busy schedules. Is there a better way where both parties, the students and their lecturers, can learn and interact without the constraint of space, time and availability?

Online tutorial appears to offer a broader range of flexible learning strategies, particularly in terms of student interaction with both the teaching materials and with each other. Is it possible to strengthen the intellectual community of the topic by extending tutorials from the classroom to cyberspace?

This paper presents the findings of a qualitative study on the use of a prototype Online Discussion Board to generate more discussion time on an academic course. The study involved a group of 57 student teachers at UMS to participate in online conferencing on various topics related to an academic course of study.

The Prototype Model

Online discussions are the asynchronous posting of electronic messages by participants of a class or group in a continued conversation on topically organised questions and issues designated by the course lecturer (Raleigh, D., 2000). The researchers and authors of this paper jointly developed the online discussion board model for this study. It has a user-friendly interface to enable the registration of students. It also allows them to join discussion at ease and view opinions/discussions/ideas posted by all participants (see Appendix 1)

The prototype model is a web-based model developed in Hyper Text Mark Up (HTML) language. To incorporate dynamic and interactive activities on the web pages, they are rewritten as Active Server Pages (ASP) via Microsoft FrontPage HTML Editor. ASP,

which was developed by Microsoft, is a server-side scripting environment that enables combination with HTML to create dynamic web applications (Kaufman, J. et. al., 1999). To work with databases, another Microsoft product was used, ActiveX Data Objects (ADO). ADO works with the database provider known as OLE DB. Data is sent and retrieved via a valid OLE DB provider and ODBC (Open Database Connectivity), which has the drivers to the various types of database files. Data is usually rearranged or restructured through the help of Structured Query Language (SQL) before it is brought up to the participants' view on a web page.

Related Studies

In the Information and Communicative Technology (ICT) era, e-learning is one of the most important modes of learning. Universities and colleges worldwide embark on e-learning to save costs and ensure bigger student population coverage. Why do institutions of higher learning going all out for e-learning? Ester (1995) in reviewing literature on computer assisted instructions (CAI), had found that CAI can significantly improve student achievement. Other CAI researchers also supported this finding (Brush, 1997; MacGregor, 1988; Mevarech, 1985; Thomas Kok, 1989).

Although e-learning is moving towards synchronous or live type of learning (Gartland, F., 2001), asynchronous learning such as the use of online discussion board should also be utilised. This is due to the fact that live learning such as Internet chatting (ICQ) and live conferencing can be quite costly and hindered by limited bandwidth. On the other hand, we should not just opt for passive learning using technology because limiting

computers to the "delivery" of instructional programs that are not interactive in nature would 'leave a student staring at a screen' (Koehler, A.G., 1998).

Combine modern technology with the learning sciences and learning can take place through a seamless mix of just-in-time experiences, interactive learning tools, decision support mechanisms and simulations. If we add collaboration and social interaction, the potential is unbounded. The real learning situation and environment may actually be a mix of face-to-face and virtual environment. This is because course materials may be presented by the lecturer in a classroom some of the time but could also be presented via a networked computer node that students can assess from a location away from the classroom (Taraban and Rynearson, 1998).

The fun of online learning is that students get to learn without time and place constraints and without the fear of gender, racial, age, or disability bias (Caverly and MacDonald, 1999). Effective online distance education requires students to collaborate effectively online among the lecturers and students and among students and students (peer learning). How can instructions be strategised effectively to achieve effective and meaningful online discussion?

According to Caverly & MacDonald (1999), there are generally three types of online courses. In type 1 discussions, students participate by answering questions by the lecturer or turning in homework but no interaction is provided between students. In type 2 discussions, discussion is controlled and led by the lecturer without further addressing

any new questions from students whereas in type 3 discussions, all online discussions are student-led and student-centred.

In view to the three types of online discussions, there is a need for the course lecturer to examine and evaluate online course/modules of its instructional objectives and strategies. The need to achieve student-led and student-centred type of discussion is of top priority because it enhances peer learning under the observation and guidance of the lecturer.

Another reason that supports student-centred learning is the encouragement of forming learning teams (Klemm, W.R., 1998). When students engage and discuss in a cooperative or collaborative manner, the quality of the input (discussions) on the online board will improve. Forming learning groups allow students to acquire team spirit which will provide students with powerful incentive to become more engaged in online discussions (Klemm, W.R., 1998).

The authors also studied and examined other similar online discussion boards offered for free usage such as Nicenet (available at URL: http://www.nicenet.org). It was found that some of the features that are offered by Nicenet are quite similar to the prototype online discussion board under study. The similarities are there are interfaces for registration of students, join discussions and view discussions. E-mailing facility is also available to enable students to post personal comments but will not appear on the main board.

The ability to establish interaction with and between students by means of e-mail, bulletin boards, chats and forums is one of the strengths of online teaching. The discourse

of learning, made possible through these media, enables students to affirm their own ideas on a topic or a concept by putting their thoughts into words in an environment where peers can react and contribute to the developmental process.

Collaborative learning -- social learning for activities, assignments, and problem-solving - is now possible, providing both motivation and interpersonal skill-building.

Online discussions, by means of e-mail and forums, which involve asynchronous interactions aid in developing students' critical thinking skills and communication skills. The interactions made possible by the technologies discussed here have great potential for deep and lasting learning.

Asynchronous **forum discussions** have particular advantages in contributing to the reflective and interactive learning processes. Asynchronous forums give students the opportunity to reflect on the discussion and plan their input, making for a more reasoned and in-depth contribution. For the student using dial-in access this enables them to compose a message off-line and upload it to the forum when online, so saving in connection time for which there is often a time-based charge.

The brief literature review thus far points towards the immense potential of online learning. There are potential benefits that could be exploited pedagogically**.** Salmon (2000) points out that although much has been written about the online environment not much has been written on what teachers, tutors, and learners actually do online. This study is an attempt to seek more information on an aspect of e-learning, asynchronous forum discussion.

Research Questions and Rationale

This study looks at the development of a prototype online discussion board and the circumstances of its implementation in a campus based course. Specifically it aims (1) to investigate the effectiveness of a prototype online discussion board in facilitating online discussion between course lecturer and students and students and students; (2) to find out the effectiveness of the prototype model to facilitate and augment the teaching and learning process.

Questions this study sought to answer are:

1. What are the strengths and weaknesses of the prototype model in managing and facilitating online discussion?

2. What are the opportunities and hindrances in implementing online tutorial strategies via an online discussion board in an academic course?

Methodology

Research Design

This study adopted a case study approach as it provides the researchers the opportunity to have an in-depth understanding of the situation and meaning of those involved. The interest is the process rather than outcomes of the implementation in the context of implementing online discussion using a prototype online discussion board.

Population and Sampling

A class of 57 second year students who followed the B. Ed TESL program took part in this study. Of this 29.8% are males and 70.2% are females. The authors chose this group of students as they were the direct beneficiary of this pilot study and their experiences in the process and procedures involved in the implementation of this mode of learning would be relevant. All the students were required to participate in the online discussion in order to earn marks for their online contribution.

Instrument

Two main instruments were used for data collection; **questionnaire** and **interview.** Students' online responses (postings) were documented and analyzed to inductively establish relevant sub-headings for further discussion. The open-ended questionnaire which essentially was an elicitation instrument probed into the opportunities and hindrances surrounding the use of the prototype online discussion board. Besides eliciting demographic information, questions probing students' online learning experience; the opportunities (advantages) and hindrances (disadvantages) of using the online discussion board versus the conventional face-to-face tutorial discussion, the limitations of the prototype model; and their perceptions of their online learning experiences were asked.

The interview allows the researcher to probe deeper into the events and processes involved in the online discussion board. *Structured interviews* were conducted with a

few participants. The purpose of interviewing the selected individuals was to seek richer and deeper insights pertaining to their opinions and feelings towards online conferencing. The topics and issues asked during the interview were mainly based on the following outline: (1) To what extent do you think the online discussion board has helped you in learning about your course TE 2013? (2) What are some of the advantages you can derive from using this channel/medium of communication? (3) What are some of the problems (disadvantages) you faced during the course of using the online discussion board? (4) Do you like online tutorial to be a permanent feature in your course? (5). Do you think it is fair to evaluate you on your online participation? Give reasons. (6) Give suggestions how we can improve online tutorial discussion.

Document analysis was carried out to examine the students' responses on the fortnightly held online discussions. The purpose was to inductively establish a categorical system for organizing open-ended information into manageable proportion looking specifically into the effects of the online discussion on the students' learning, social and emotional development.

Results & Discussion

The opportunities and hindrances in implementing an online discussion board in an academic course

Outlined below are the experiences and observation of the researchers pertaining to the process of implementing the online discussion board. Also presented is the experience of designing and developing a prototype model of the discussion board for use.

Researchers' perspectives of the implementation of the discussion board.

Strengths and Weaknesses of The Prototype Model

The strengths of this prototype online discussion board are as follows:

- Evidence from the board (after students' participations) showed that cooperative and collaborative learning occurred because the participants formed discussion groups to discuss and exchange ideas prior to their engagement to the online board after each topic was assigned to them.

- The prototype board was able to attract increased participation from students. This is evident in the increased number of times they posted their comments and ideas to the board. The board recorded overwhelming support from course participants.

- Another noticeable strength of this prototype model was the frequent use of the e-mail tool (an interface on the board) by students to make direct contact with course lecturer when they face difficulties in understanding difficult or undefined terms. The evidence from the case study showed that the number of e-mails received from the participants were as many as messages/comments posted to the board. This demonstrated a positive sign of learning because the prompt responses from the lecturer for students' queries helped in improving the quality of ideas inputted to the board subsequently.

The weaknesses of the prototype board are as follows:

- The case study revealed that there were some cases where students failed to log on to the prototype discussion board due to technical errors, which is beyond the control of the researchers. This is because a computer server with supports for ODBC drivers for database connectivity is needed. Pure technical problems, which were encountered, were like the number of concurrent users allowed by the host and database connectivity. The problem occurred because a web hosting company hosted this prototype online discussion board.

- There were limited facilities offered by this prototype board such as interfaces for adding discussion topics (the topics were upgraded and uploaded manually) and deleting topics that were already being activated by the students. The authors had to delete data from the database manually for any subsequent changes. Perhaps a second version of the prototype discussion board could incorporate the required features.

- Evidence from the case study also showed that the course lecturer was unable to cope with overwhelming responses from students who participated in the online discussion board especially in dealing with extra e-mails consisting questions and issues from them. The lecturer could only be selective in dealing with personal e-mails and conducted group face-to-face discussion on selected issues only. This nevertheless also contributed to good quality discussions posted to the board but rendered unnecessary workloads and stress to the lecturer.

Students' perception in the use of the discussion board.

The following results are derived from analysis of students' comments in response to the open ended questionnaire and content analysis of the students' postings. The responses were mostly quoted in verbatim under inductively derived sub-headings pertinent to the second research question of identifying the opportunities and hindrances in implementing online tutorial strategies. Responses deemed as opportunities are listed under positive comments while hindrances are listed under negative comments. Shown below are some of the more pertinent responses.

Positive comments:

Intellectual benefits

The online tasks and tutorial were new to me but I found them interesting, learnable, time saving and challenging. I have learned something new which I have never learnt before.

I learned much more from online tutorials as I can read the different views and experiences from my coursemates compared to the conservative technique of sending in written work and with the lecturer the only person reading all the responses.

Social benefits

Conferencing online is a good way to share ideas with friends. We can also contribute our ideas as not all people like to talk in front of the class. In this way other students can also share their points of view.

Online conferencing is one of the most sophisticated ways in conveying knowledge and contributing ideas without a feeling of shyness and hesitation. Everyone has a fair chance to contribute ideas and opinions to be shared among the members in the class.

Emotional benefits

Through this online conferencing too has made me feel at 'home' and comfortable with my coursemates especially with all the open and mature ways of sharing ideas concerning the course and its contents.

I like online tutorial very much as I can participate freely without shyness and it really helps when I can learn from others and can share at the same time.

Online tutorial is a completely new experience to me. Even though I always grumble to myself about the online tasks, it's a wonderful experience. I do hope this online tutorial will be used in other subjects as well.

Intellectual, Social & Emotional benefits

I personally enjoyed doing the online assignments plus reading the comments, sharing and ideas given by my coursemates. Having read the constructive reflections by others have truly helped me improve my way of thinking and learning as a whole.

I have to admit the online assignments were annoyingly inconvenient initially but I progressively began to like them. I just have to 'log on and go', minus the hassle of printing, binding and handing in the assignment. Also, it is very interesting and an eye-opener to read other people's submissions. I think we learnt a lot from reading one another's opinions.

Negative

Absence of immediate feedback

The online tutorial is something new but face-to-face tutorial is still needed because some questions or vagueness would require immediate response or feedback from either the lecturer or fellow coursemates.

Online tutorials are very much welcomed but I still prefer the traditional 'face-to-face' tutorial. Discussions can be done on the spot and any questions about certain topics can be posed and explored together with the lecturer and friends.

Logistical problems

The online tutorial is something new and it gave us quite a run for our money as not everyone has a computer to log on immediately as required. Some of us need to queue up at the library to wait for our turn to use the computer. Even the tasks and questions given needed to be digested carefully and sometimes we just don't have enough time to answer the tasks appropriately.

Lack of prior training

I tried posting my messages many times but I always failed to do so successfully. My coursemates told me that I have done the wrong thing and said that I should have done this and that. I have wasted a lot of time and money and I think it's not fair to be penalized because of my failure to contribute to the discussion topic. The lecturer should teach us how to use the discussion board first before assessing us straightaway.

Lack of proper moderations

My only criticism of the online tutorial/assignment is that the home menu can get a bit confusing. It is not clear, which topics are assignments given by the lecturer and which are private discussions (sub-threads) started by some of our friends. Some of us cannot participate in all the discussions, but we all have to response to the lecturer's assignment by a given deadline. In future, make it clear in the home menu topic title, which are the compulsory assignments and which are the private discussions.

It is obvious that there are both pros and cons to the use the prototype online discussion board. A point worth noting is that all the 58 respondents responded with a resounding yes when quizzed if they like to continue with this mode of tutorial in their future course of study. The majority of the students felt they enjoyed learning through the online mode. Cognitively, almost all the students acknowledged that the asynchronous forums gave them the opportunity to reflect on the discussion and plan their input hence making for a more reasoned and in-depth contribution. Online discussion also seemed to have an effect on them socially and emotionally. Quite a number of students mentioned that they were bolder to give their opinions as the aura of anonymity gave them the courage 'to speak out' and 'to be heard'. A number of students also mentioned that emotionally they felt 'comfortable' and 'at ease' using this forum because they could all learn to share, comment and improve on one another's understanding of the course content. A few students specifically stressed that they like the ease of use and flexibility of the online discussion board as they can 'log on and go' at a time most convenient to them, minus all the encumbrances that go with the traditional face-to-face tutorial such as meeting at a fixed time, in a fixed place and at a fixed set-up.. Perhaps the most mentioned point by all is the chance to read and share one another's opinion in the forum and the following words from one of the interviewees succinctly summed up the feelings of most of the participants, "Everybody can read everybody's work! The best part is everybody is a somebody and nobody feels alienated in this forum."

Besides the plus points, some of the problems (weaknesses) mentioned ought to be taken into consideration. Among the problems mentioned were those related to immediate

feedback, logistical problems, improper moderation and absence of pre-training. Further probing in the interview revealed that most students had anticipated the lecturer to provide immediate feedback and assessment marks to them after every deadline. The participants also felt that the lecturer ought to empathize more with their problems, especially their inability to log online from their respective hall of residence or homes. They felt the two–week deadline for submission for each online forum was too short as many of them were busy and had real difficulties in securing internet-linked computers in the campus. One student mentioned that the lecturer ought to better moderate the discussion board to prevent over cluttering of topics on the main menu page.

Taking cognizance of the aforementioned comments and discussion, the authors have come up with a set of tips to further enhance teaching and learning via an online discussion board. The next section on recommendation outlines these tips.

Recommendations

Based on this study, here are some tips for any teacher or course developer interested to explore online discussion board. This is by no means a full proof strategy but rather some pointers to avoid potential problems that might befall any user who has no prior experience working with this mode of teaching and learning.

Things to consider when deciding to use online discussions:

1. Set expectations in your syllabus about the use of electronic communication and your availability to respond to messages.

2. Train learners to use the discussion board before using it as an assessment mode for online contribution.

3. Schedule time to introduce and train students to access and properly use the discussion board features.

4. Set up one forum for learning how to use the discussion board. Start by having each student post something about themselves and reply to at least one other student before actually setting any tutorial task.

5. Provide guidelines and expectations for students, such as if or when they are required to post, whether they are to read all posts, how many of the posts you intend to read, how posts will be graded, and issues of style and netiquette.

6. Define the relationship between electronic and class discussion. For example, will students need to have made a post or read or replied to other students before a specific class period?

7. Organize forums around key topics of the course. Inform that only the instructor can create conference topics (forums) and must be participated by all. However, students are encourage to create threads of their own if and when desired but they are not compulsory to participate and will not be assessed.

8. Students should use the discussion board wherever possible so that contribution from all quarters can be publicly viewed by all.

9.   Make it clear that e-mail, while being very efficient for direct communication of time-sensitive issues related to the course, is reserved for something of a confidential nature or needs a specific response from the instructor.

10.   Inform the learners that using the discussion board is not only in accordance with the premise of the collaborative, cognitive learning model, but is also efficient because learners are likely to get faster answers from their peers, since everyone in the class can read every posting.

Conclusion

This study of creating a prototype online discussion board and the process of investigating the effects of using it as a supplement and/or alternative to the conventional face-to-face tutorial in university teaching has been an interesting revelation to us. No doubt there were some teething problems we had to endure but all in all it had been a satisfying experience for us.

Traditional classroom-based tutorial still is and will continue to be an important feature in university teaching, as demonstrated in some of the responses shown earlier. But in an era where ICT is gaining momentum and gaining prominence, it is timely to consider alternative tutorial discussion such as using the online discussion board. The conventional procedure of holding tutorials across a broader spectrum of the day or having extended tutorial hours does not offer any new hope of a long term solution to our busy schedules.

Online tutorial seems to be a viable alternative. It may not be a panacea to all our problems but certainly it appears to offer a broader range of flexible learning strategies, particularly in terms of student interaction with both the teaching materials and with each other. It is certainly possible to strengthen the intellectual community of the topic of study by extending tutorials from the classroom to cyberspace.

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COOPERATIVE LEARNING VERSUS INDIVIDUALIZED LEARNING: EFFECTS ON ACHIEVEMENTS, ATTITUDES, AND BEHAVIOURS

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ABSTRACT

The main purposes of this study were to: (1) analyze documents and studies concerning Cooperative Learning, (2) present teaching strategies, (3) compare the achievements and attitudes of the cooperative learning group with the individualized learning group, and (4) observe, record, and compare the behaviours of the cooperative learning group with the individualized learning group. Sixty-four second-year students of Burapha University were randomly sampled and heterogeneously divided into two equal groups, cooperative and individualized. Achievement and attitudinal data were collected and analyzed by t-test. Participants' behaviours were also recorded and analyzed by frequency occurrence. The duration of this study was one semester. Results revealed that the participants in the cooperative learning group had a significantly higher achievement and better attitudes than those in the individualized learning group at *p<.05*. In addition, the former group had more favourable behaviours than the latter group.

INTRODUCTION

The quality of university education mainly depends on the quality of classroom instruction. To boost the instructional quality, faculty needs to find out the most fruitful teaching-learning process that enhances cooperative learning environment. However, most faculty members ignore the should-be pedagogical aspects of university pedagogy. Teaching is still considered a routine task that anyone can do. To put in another way, anyone who has high degree can teach. Their job is to pour information and students' job

is to collect and put it into their memory. As a consequence, students are passive recipients of the information that is fed into their heads.

The above assumption is based on the old paradigm by John Locke who once said that a student's mind was a blank sheet of paper waiting for a teacher to write on. Thus, the teacher's main task is to fill their empty brain as much information as possible. None of the information is students' own products. The classroom atmosphere is a competitive organizational structure in which students work to outperform their classmates and faculty work to outperform their colleagues (Johnson, Johnson, & Smith, 1991). Everyone in the classroom is considered enemies rather than valuable learning resouces for one another. Students might complain, "Two hundred million school days lost to illness this year, none of them ours!" This complaint clearly expresses their needs of some revolution in education, from the teacher-centredness to the student-centredness. Although, in the Thai context, the concept of student-centredness in which students are allowed to learn things in a cooperative learning mode has been said in the Ministry of Education or of University Affairs curriculum, it has never truly permeated through to the educational system. An effort to promote the idea of cooperation among students has been addressed in the curriculum, but the largest ratio is still the teacher talk. Classroom practice has tended to emphasize the competitive learning mode. Students work alone and compete with each other on tests and examinations for the rewards of the educational system. However, the implementation of tasks which "engage and involve all atudents more actively" in the classroom has been strongly recommended. Active involvement

among students through the use of Cooperative Learning that fosters the hum of voices in the classroom was therefore of great interest to me.

COOPERATIVE LEARNING

Cooperative Learning is an instructional use of small groups so that team members work together to maximize their own and teach others' learning (Johnson, Johnson, & Holubec, 1994). In other words, it is a process by which students work together in groups to master material initially presented by the teacher. The goal of cooperative learning is for students to help each other succeed academically to achieve a common goal. Whereas, in an individualized or in a competitive learning, students are independent of ane another and are working toward a set criteria where their success depends on their own performance in relation to an established criteria. The success or failure of other students does not affect their score. Rewards depend on his or her doing better than others. It is in contrast to cooperative learning environment by which rewards depend not on doing better than someone else, but on doing well with someone else.

Cooperative learning builds on the concept that much of learning is social. It challenges the format of ability grouping and teacher-centred instruction. In a cooperative classroom, the teacher organizes major parts of the curriculum around tasks, problems, and projects that students can work through in small mixed-ability groups. The teacher designs lessons around active learning teams. Students then work together to reach common group goals (Hamm & Adams, 1992).

Thus, Cooperative Learning is a team strategy which makes the classroom exciting. Team learning succeeds because it allows for fun, freedom of choice, a feeling of importance, and a strong sense of belonging to the group. Everyone is responsible for his or her own learning. Students choose to do what is most rewarding. This kind of learning helps them view a classroom as a place where work satisfies their needs enough that it makes sense to continue working.

BASIC ELEMENTS

To apply the Cooperative learning to classroom instruction, the teacher must bear in their minds the following five essential elements. To begin with, cooperative learning requires *face-to-face interaction* which occurs as individuals encourage and facilitate each other's efforts to reach the group goals. By using this interaction, learning becomes active rather than passive. Teams encourage discussion of ideas and oral summarization. Peer assistance clarifies concepts for both helper and the student being helped. Cooperative teams help students learn to value individual differences and promote more elaborate thinking. Second, The relationship among group members can be described as one of the *positive interdependence*, that is, members must cooperate in allocating resources, assigning roles, and dividing labour if they are to achieve their goals. Students must feel, "I need you, you need me" to complete the group's task. This independence can be built into the task by jigsawing information, by limiting materials, by having a single team product, or by randomly selecting one student to answer for the team. Third, cooperative learning usually assigns some degree of *individual accountability* for

sharing, cooperating, and learning. Students must feel that they are each accountable for helping to complete a task and for mastering material. Ways to build in individual accountability include: each student is responsible for a specific portion of a task; each must be able to summarize another's ideas; and any student may be called on at random to answer for the team. Fourth, cooperative learning involves the use of *interpersonal and small group skills*. Group members must know how to provide effective leadership, decision-making, trust-building, communication, and conflict-management. Finally, to ensure sustainable success of using cooperative learning in the classroom, the teacher should invest some time and effort in *group processing* which requires the group to discuss at the end of each lesson how well they have achieved the goals, maintained effective working relationships and set goals for improvement (Onwuegbuzie, 2001; Dishon & O'Leary, 1998; Prince George's County Public Schools, http://www.pgcps.org/~elc/learning1.html).

STRUCTURING COOPERATIVE INSTRUCTION

To achieve the above five elements, these have to be done at the beginning of the lesson to "set" the cooperative goal structure, and the role of the teacher as the students are working. First, the teacher needs to *select a lesson* and build slowly. Cooperative learning groups have shown to be especially effective where conceptual learning, problem-solving, or divergent thinking are required. Second, the teacher needs to *make decisions* by selecting the groups' size most appropriate for the lesson and the nature of the task, by assigning the students to heterogeneous groups, by arranging the classroom where group members are face-to-face and knee-to-knee, by providing appropriate

materials to study and one answer sheet to be turned in by the group with everyone's signature which is a way to emphasize the task and cooperative goal structure to the students as clearly and specifically as possible, by monitoring the effectiveness of the interpersonal and group skills of the cooperative learning groups and intervening to provide task assistance, and by evaluating the students' achievement and helping students discuss how well they cooperated with each other (Johnson, Johnson, & Holubec, 1994).

RESEARCH METHOD

Participants

This study consisted of two participant samples at Burapha University. The first was the experimental group which included 32 second-year students who learned cooperatively. The second was the control group which also included 32 second-year students who learned individually. Both experimental and control groups were heterogeneous; that is, mixed-ability students and equal numbers of boys and girls. Since 32 students studied English for Academic Purposes I in the morning and another 32 studied in the afternoon; thus, they were divided into 16 each, that is, the first 16 students were the cooperative learning groups which were subdivided into four smaller groups. Each smaller group had four members: one high achiever, two average achievers, and one low achiever. Another 16 students were the individualized learning group. Why was the idea of heterogeneous grouping used in the cooperative learning groups? Larson and others found that working in heterogeneous groups benefited low-ability students because they were able to observe strategies of high-ability students. Similarly, high-ability studentslearned new strategies by teaching other students in the group. Moreover, in a study examining helping

behaviour, Webb found that group with equal numbers of boys and girls promoted more explaining between students than did same-sex groups (Webb, 1989; 1992).

Materials

The materials used in this study were prepared in advance for a year before this research was presented to the faculty for financial support. Most reading texts were downloaded from the Internet. The rest were selected from textbooks. The sorting methods were: interest, level of difficulty, length, and relevancy. The worksheets were researcher-made. Some teaching strategies particularly in the cooperative learning groups were selected from the 20 cooperative strategies presented in this study (Jigsaw, Cooperative controversy, Pairs check, MURDER, STAD, Talking chips, Group investigation, Corners, Teams-Games-Tournaments, Think-Pair-Share, Think-Pair-Square, Numbered Heads Together, RoundRobin, Rountable, Write-Pair-Share, Write-Pair-Square, Advance organizer, Mapping/Webbing, K-W-L, and Fish bone). The selection technique depended on their appropriateness to the content in the reading texts and researcher-made worksheets that lasted two weeks on each reading title. Below were the titles of the reading texts:

1. The Big Bang Theory

2. Photosynthesis

3. The Beatles' Battles

4. Cyber Crime

5. The Whale

6. Presidential Personality Traits

7. Nutritional Factors

Instrumentation

The instruments used in this study included a multiple-choice achievement test, an attitude survey sheet, and a classroom behaviour code sheet.

Teaching procedures and settings

There were five phases. *Phase I* started the first week of the semester. Icebreaker activities were used to help participants from every faculty get acquainted with one another. *Phase II* started the second week of the semester. Sixty-four participants were pretested using the researcher-made achievement test which the validity, reliability, and item analysis had already been consulted, improved, and computed. This test lasted two hours. After the test the participants were asked to rate on a 5-point Likert Scale ranging from 1 (strongly disagree) to 5 (strongly agree) of the attitude survey sheet. The participants' marks from the achievement from the achievement test and attitude survey sheet were saved in a diskette for further use. *Phase III* started on Thursday of the second week. 32 participants of the Friday morning class were separated into the cooperative learning group and the individualized learning group. Two students of equivalent ability and same gender did the "paper, hammer, scissor". The winner's name was then put in the cooperative learning group. The loser's name was put in the individualized learning group. Other 32 participants of the Friday afternoon class did in the same way. *Phase IV*

(teaching) started from the third week to the last week of the semester. The morning session and the afternoon session consisted of 32 students each (16 students were the cooperative learning group and another 16 students were the individualized learning group). These students studied with the researcher in the same classroom. Students in the cooperative learning group sat at the front class in small groups (2-4 members) while students in the individualized learning group sat in rows at the back of the classroom. Students in the cooperative and individualized learning groups received the same instructional material, were taught by the researcher, using the same curriculum, and received the same number of in-class and out-of-class assignments. The only difference was the study guides and the procedure. While the participants were performing their tasks, they were also observed and their behaviours were recorded using these codes: OT (on-task), P (punctuality), I (interested), DO (distracting others), ID (irrelevant discussion), F (frustrated), N (napping), QD (quiet but distracted), AU (attentive but uncomprehending, DT (dependent on the teacher), and A (absence). *Phase V* (posttest) 64 participants from the morning and the afternoon sessions were tested using the same achievement test as the pretest. The same attitude survey sheet was also ticked on the 5-point Likert Scale by the participants.

Data Analysis

The participants' papers were marked and analyzed using the t-test formula to compare the achievements and attitudes of the cooperative learning groups and the individualized learning group. Participants' behaviours based on the frequency occurrence were also analyzed.

Results

The results of the participants' learning achievement, attitudes, and behaviours were tabulated as follows:

Table 1 Learning achievement

Cooperative		Individualized		
				t
M	SD	M	SD	
39.19	38.55	35.88	61.06	1.878*

Note: *p<.05*

Compared to the t-score (1.878) with the *df* of *t* at 60 is 1.671, it is seen that the t-score is higher than the *df* of *t*. This means that the participants in the cooperative learning group had a significantly higher achievement than those in the individualized learning group at *<.05.*

Table 2 Attitudes

Cooperative		Individualized		
				t
M	SD	M	SD	
87.72	64.19	84.22	46.87	1.882*

Note: *p<.05*

Compared to the t-score (1.882) with the *df* of *t* at 60 is 1.671, it is seen that the t-score is higher than the *df* of *t*. This means that the participants in the cooperative learning group had a significantly better attitudes towards the learning conditions than those in the individualized learning group at .05.

Table 3 Participants' behaviours

Cooperative		**Individualized**	
Code	**Frequency of occurrence**	**Code**	**Frequency of occurrence**
OT	almost always	OT	usually
P	always	P	frequently
I	almost always	I	usually
DO	hardly ever	DO	occasionally
ID	seldom	ID	rarely
F	hardly ever	F	often
AU	hardly ever	AU	sometimes
QD	never	QD	seldom
N	never	N	occasionally
A	never	A	rarely
DT	rarely	DT	sometimes

Notes:	**100%**	**always**
		almost always
		usually
		frequently
		often
	50%	**sometimes**
		occasionally
		rarely
		seldom
		hardly ever
	0%	**never**

From the table it could be seen that participants in the cooperative learning groups had more favourable behaviours than those in the individualized learning group.

Discussion

The findings of this study support the hypothesis that cooperative learning groups outperformed the individualized learning groups. However, since only the researcher and a number of participants participated, and since this study focused only on language arts curriculum, the results of this study have to be accepted tentatively until replication are conducted. Moreover, while the results of this study indicate the superiority of cooperative over individualized learning technique, it does not mean that the individualized learning should be dropped. What is needed is a series of studies which demonstrate the specific conditions under which each type of learning structure is effective and useful in achieving desired educational outcomes.

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COMPUTER CLASSROOM DESIGN FOR COOPERATIVE LEARNING FOR UNDERGRADUATES IN THAILAND

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Abstract

The new age of the world has come and the educational system of the world must also change along with the new technologies that are being constantly developed. Computer plays the great roles in every instruction process. Since adopted in education, still, there has been no set standard ergonomics for computer classroom which suitable for Thai undergraduates physiology especially the computer classroom for cooperative learning method.

But the use of cooperative learning technique in the classroom is not something new to the educational community, in fact, the use of cooperative learning has been around for thousands of years (Strommen,1995). Strommen mentions that study after study has indicated that cooperative learning consistently yields superior result in almost every area when compared to other learning technique. Roschell (1994) reports that along with the introduction of technology into classroom, a renewed interest in the used of cooperative learning is taking place. Uslick and Walker (1994) mention that teachers feel that the computer enhances and facilitates the use of cooperative groups are continuing into today's classrooms.

This research and development attempted to find out the most suitable cooperative learning computer classroom ergonomics for Thai undergraduates. The data collection based on essential Thai students' characteristics. Some parts of researcher's in Ph.D. dissertation and further research at University of Pittsburgh also modified and applied into this research.

The facts are most Thai universities ranked behind other universities of same region in Asia and others in the more developed countries. Eventhough lots of computer labs were set up in many universities, still the system of learning and teaching are not so relevant that students can take full advantage of those facilities which they could access. The following steps were applied in research and development:

1. Conduct a needs assessment in the universities for a computer classroom
   a) Do you want a computer classroom?
   b) How will you use the computer classroom?
   c) Do instructors understand what cooperative learning means?
   d) Has the universities integrated cooperative learning into the computer classroom?
      (The answer will be on the basis of perception about cooperative learning and computer classroom design)
2. Study five types of cooperative learning
   1) Students Teams Achievement Division
   2) Teams, Games, Tournaments

3) Jigsaw

4) Learning Together

5) Group Investigation

   (Forms of cooperative learning public by National Education

   Association, 1993)

   and then

a) Survey current research on these kinds of cooperative learning.

b) Observe instructors using the method in the classroom situation.

3. Summarize information from step 1 and 2

4. Based on the result of step 3 prepare a lesson plan to train the teachers how to implement the cooperative learning method in the computer classroom.

5. Design several computer classroom floor plans for cooperative learning. (The 25 experts will select one floor plan)

6. The five cooperative learning methods will be tested with the floor plan chosen in step 5 for effective learning by students. Results of the test will yield the most effective method for the floor plan.

7. Assess which method was most effective with the selected with the selected floor plan based on interview and observation of the teachers and students.

At the end of the process, it is possible to know how to design computer classroom for cooperative learning for undergraduates in Thailand for the challenge of learning and teaching in a brave new world.

1. A Learner-Centered Approach

An outstanding feature of the organization of the learning process through the learner-centered approach is that, apart from teachers who play an important role, there are also others concerned who can provide necessary support, thus contributing to the success of the reform. Even learners themselves need to take an important part in the learning process.

The learning society embraces personnel both within and outside the school. Within the school, other than teachers and administrators, there are staff members who provide support for teaching-learning activities as well. There is also a school board. Outside the school, there is a network of parents, local wisemen, community leaders, teachers, training institutions, agencies, organizations and enterprises including mass media, all of which can contribute to generating learning.

Activities to be jointly taken by those concerned with learning are:

1. **Need identification** which means finding out learners' needs through asking questions, observation, interview etc. to generate/stimulate interest and identify interests and basic knowledge already acquired by individual learners.

2. **Standard setting** which means setting targets and standards so as to enable learners to learn in accord with their aptitude and interests, and to their highest potential.

3. **Planning for learning** which means planning of learning activities in accord with learners' needs.

4. **Learning** Which is an interactive process of building knowledge from analytical thinking, planning and action.

5. **Evaluation** which is an assessment of experiences in the organization of the learning process, focussing on benefits obtained by learners.

6. **Conclusion of learning outcomes** which means application of assessment outcomes for further development, amending deficiencies in learning and organization of teaching-learning activities.

Participation in the learning process enables all concerned to appreciate their valuable contribution to the encouragement and support of the effective development of learners. Schools are no longer "Trespassing Prohibited" areas. Schools, communities, community institutions and the families all have participatory roles in education. Co-operation of all involved will result in building of strength and mutual support, and will thus bring benefits to children and youth who are out hope for the future.

* Parents having more prominent roles through co-operation in the organization of and providing support for their children's learning process at home, in school as well as at different learning sources.

* Participation of communities in the formulation of policies regarding the organization of the learning process; the communities also serve as sources of local wisdom.

* Decentralization of authority by control agencies in the formulation of policies and goals for educational institutions, administrators and teachers.

* Mass media participating in public relations work, supporting educational activities; contributing to collective efforts to generate proper understanding and inculcate desirable attitudes for society as well as providing support for implementation.

Chart 1 : Situation without participation of all concerned

Other agencies
- Strengthen the learner-centred approach through academic support and provision of resources, personnel and learning sources.

Mass media
- Public relations campaign enabling learners, teachers, parents and others concerned to have true understanding of learning.

Central authorities
- Formulate policies, goals and standard.
- Delegate powers to educational institutions and teachers.
- Follow-up and evaluate.

Teacher training institutions
- Research and develop bodies of knoledge on teaching and learning through the learner-centred approach.
- Disseminate bodies of knowledge.
- Produce quality teachers.
- Provide academic support.

Learners
- Participate in identification of needs, make plans for learning, carry out activities and take part in evaluation.
- Are able to learn in accord with aptitudes and interests, carry out practical work and learn happily.
- Are able to apply knowledge to daily lives.

communities
- Participate in the learning process and serve as learning sources.

Teachers
- Know learners individually.
- Prepare subject matters and learning activities appropriate to learnners.
- Assist and facilitate in learning process.
- Provide opportunities for learners' participation at every stage.

Educational institution administrators
- Participate with learners and teachers in the organization of learning activites.
- Support learning activities through the learner-centred approach.
- Avail themselves of learners' assessment results for fomulation of policies of educational institutions.

Parents
- Participate more in the provision of education.
- Participate with teachers and schools in application and promotion of the learner-centred approach.
- Provide their children with advice and support.

All concerned lend co-operation and support

Chart 2 : Situation with participation of all concerned

Benefits accrued to all concerned

• Learners are able to develop to their fullest potential, in accord with their aptitude, interests and capabilities; learn how to acquire knowledge; are happy in learning; and love to learn throughout their lives.

• Teachers are endowed with knowledge and understanding. When experiences in learning through the learner-centered approach make the learner happy, teachers also become happy and learn to develop themselves to become professional teachers.

• Parents are cognizant of and realize their children's aptitude; interests, abilities and potential in learning; understand their roles in providing support and encouragement of their children's learning; and are happy to contribute to the development of their children's education and learning.

• Administrators will have developed schools to become institutions of quality and of the highest benefit to learners; in fact, institutions of learning, not of teaching. Administrators also carry out their functions with participation of students, teachers, parents and communities.

Teacher training institutions will have produced graduates and teachers of quality, and with responsibility towards themselves, their profession, society and the country.

Community and society as a whole will have people endowed with quality, potential and responsibility for the development of the community, society and country.

• Society and the nation will be endowed with people with virtue, quality, and the potential to further develop the country.

• Other bodies will have made a contribution to the country in developing the people to attain virtue, quality and potential for the further development of the country.

2. Cooperative Learning in Education

The use of cooperative learning technique in the classroom is not something new to the educational community, in fact, the use of cooperative learning has been around for thousands of years (Stronmmen, 1995) Strommen mentions that study after study has indicated that cooperative learning consistently yields superior result in almost every area when compared to other learning technique. Roschell (1994) reports that along with the introduction of technology into the classroom, a renewed interest in the used of cooperative learning is taking place.

Uslick and Walker (1994) mention that teachers feel that the computer enhances and facilitates the use of cooperative groups is continuing into today's classrooms.

The results of recent studies show that the use of cooperative learning techniques with children foster the development of leadership skill, a sense of teamwork, and improve self-esteem (Strommen, 1995). Chiu (1995) reports that students who studied in a cooperative learning mode recalled significantly more than those who studied alone. Many authors and researchers, such as Johnson and Johnson(1989, 1994), Slavin(1990), Johnson, Johnson and Smith (1991), Dishon and O'Leary(1994), Serra (1997), and

others, have expounded upon how teachers can effectively use cooperative, or collaborative as they are sometimes called, learning techniques in the classroom.

Dishon and O'Leary (1994) point out that one of the primary purposes of using cooperative groups is to teach students social skill, skill which are needed not only to complete the current task successfully, but which are needed to make working in cooperative groups an enjoyable experience for all students in the group, a point echoed by Jewett (1996). Many occupations in society require that employees are able to work in small groups with fellow employees in a constructive, problem-solving fashion.

Johnson and Johnson (1989), after conducting extensive research, have identified five elements of effective cooperative learning structures. First, positive interdependence is essential. The cooperative learning experience must be designed so that all participants contribute to the collaborative task of the group and each member of the group feels needed. Secondly, face-to-face promotive interaction needs to be practiced. Group members, in face-to-face gatherings, promote each other's learning by helping, encouraging, and supporting one another during the cooperative learning experience. Third, individual accountability is required. Students, while working together to complete the cooperative task, still need to be held accountable for their role in the group effort. Fourth, students need to develop interpersonal and small group skills in order to be effective members of a cooperative group. They need to learn how to work together as a unit, developing positive social interaction skills, which are necessary in many

occupations in society. Finally, group processing time, time for the students to evaluate how well they are working together as a group, must be provided.

Slavin in 1980 identified the benefits of cooperative learning;

• Cooperative learning at worst does not hinder achievement and usually helps it

• For low level learning, cooperative learning more effective than traditional method

• For high level learning, cooperative learning may be more effective

• Cooperative learning has a strong positive effect on race relations

• Cooperative learning has a fairly consistent positive effect on mutual concern

• Cooperative learning may in crease self-esteem students using cooperative learning usually report they like school better.

In summary, cooperative learning techniques are not something new to the educational community, but interest in and the used of cooperative groups has increased in recent years, partially due to the use of technology. Many researchers have found that the use of cooperative groups consistently yields superior results when compares to other learning techniques, and leads to the development of leadership skills, improved social skills, a sense of teamwork, and improved self-esteem. Also, five essential elements of effective cooperative learning structures have been identified.

Various Cooperative Learning Techniques

Much research has been done concerning the use of cooperative learning as a teaching strategy for the classroom. This section reports on some of the findings which have surfaced as a result of this research. Group sizes, various methods used to assign students to a group, and students roles within a group are discussed.

Cooperative learning can be used in a variety of configurations. Groups sizes can vary anywhere from two to six members, depending on the type of activity being done. Research, however, has found that groups of four or five work best for most cooperative learning situations (Serra, 1997). However, Serra also points out that groups of two, or cooperative pairs as they are often referred to, seem to work best when doing computer activities, a finding also supported by O'Mally (1992). Such pairs allow for one student to type at the keyboard while the other verbally reads the instructions of the activity, or both students can be working at adjacent computers on the same activity, comparing computer screens and helping one another work through the activity.

Students can be assigned to groups in various ways, ranging from random assignment, such as a picking numbers out of a hat, to student selected groups, to direct placement by the teacher. Foster (1993), Serra(1997), and others, suggest that the best way to arrange students in order to create groups that will be the most beneficial and productive for all students involved, and at the same time will avoid many of the negative social problems connected with students selected groups, is for the teacher to create the groups based upon each student's ability in the particular subject area being

studied. With group of four, this is accomplished by the teacher placing the highest, lowest, and two middle ability students in the first group, and then placing the second highest, second lowest, and the next two middle ability students in the second group, etc. If the teacher does not know the abilities of the students, then a random assignment procedure is a good alternative.

Johnson, Johnson, and Smith (1991) have found that the greatest problem with group composition usually occurs with student selected group. Such groups, often consisting of students who are close friends and homogeneous in ability, tend to spend less time on-task than teacher selected heterogeneous groups. This finding is supported by others, such as Jewett(1996), who recommends only teacher formed groups. Many authors and educators also suggest forming new groups every six to nine weeks so that students become accustomed to working with other students.

Each student in the group should have a specific role assigned to them, and they need to be instructed concerning the function of their role (Johnson & Johnson, 1989)

These roles can have various names such as taskmaster, materials handler, reader, recorder, checker, encourager, gatekeeper, etc. If each members to remain on task and contribute to the overall success of the group. These roles should be rotated among the groups members whenever a new cooperative learning activities begins (Foster, 1993)

From the book " A teacher's guide to the Information Highway"

These are five forms of cooperative learning. These five forms of cooperative learning are listed and this research is concentration for my research.

Forms of Cooperative Learning

1. Student Teams Achievement Division	After a teacher presents the lesson, student teams work on assignments cooperatively to master the material.
2. Teams, Games, Tournaments	Same as above, but after studying, students compete to win points for their team.
3. Jigsaw	Students each do part of a reading and then compare notes.
4. Learning Together	Cooperative tasks are oriented to create interdependence.
5. Group Investigation	Students decide what information is needed, how it will be organized, and how it will be presented.

Wresch, William. A teacher's guide to the Information Highway. (1997)

2. Computer Classroom Design

Common design guidelines for all types of rooms.

- Acoustics:

  ° Acoustic consultants should be hired for large room designs

  ° HVAC system designs should focus on reducing ambient noise

- Accessibility: Rooms should be handicapped accessible and contain a minimum of 10% left handed tablet arms on seats

- Adequate Electrical Outlets

- Lighting:

    ° Chalkboard lighting

    ° Controls should be simple and located near the teaching station

    ° Fluorescent ballasts that operate at frequencies greater than 30 Khz.

      Can interfere with infrared controls

    ° Note-taking should be possible with dimmable incandescent or

      fluorescent light, or switchable floor/ceiling fluorescent fixtures

    ° Studio fluorescent light should be used in interactive video rooms

    ° Window coverings- There should be two types of coverings;

      drapes/blinds, shades/blinds, shades/shades

- Instruction Media:

    ° Standardize on equipment

    ° Encourage use of laptops by instructors/students

    ° Equipment closet in corner of room near teaching station for room

      controls, A/V and computer systems

    ° Use overhead projector carts w/fold-up shelves

    ° Computers-Locate CPU under tables but protected from damage by

    kicking or knocking over

    ° VCR- Low cost and simple to operate

    ° Slide Projectors- Located at back of room

    ° Several projection screens that do not entirely block blackboard

- Telecommunications

    ° Adequate network connections and infrastructure (conduit)

° Involve Network Service Team early on

° Security- Consult with Policy and classroom technology

Some recommended concepts that should be followed when designing classroom are:

• Keep it simple and flexible.Technology should be easy to used.

• Create many economical smart number of expensive technology showcase rooms.

• Get faculty, staff (various disciplines), and students (if practical) involved early on in the design.

• Think long term- a room may be renovated every 15-20 years. Install conduit and cabling that accommodate future needs.

• Good design is not an accident, and students deserve the best possible learning environments.

The electronic classroom environment is comprised of seven main elements:

1. The students

2. The instructor

3. The space

4. The furnishings

5. The hardware

6. The software

7. The network

The ideal learning environment integrates all of these elements based intended

goal of

the instruction offered. Although the workstations, lecterns, storage components, seating

and accessories , the total package that provides an ergonomics interface for all of those

seven main elements and, as a result, improves and enhances the learning experience.

And

Mcvey(1985) said cover three areas for the physical space

1. Seating considerations

2. *Seating arrangements and social interaction

3. Seating capacity, configuration, and room size

This research will focus on seating arrangement and social interaction
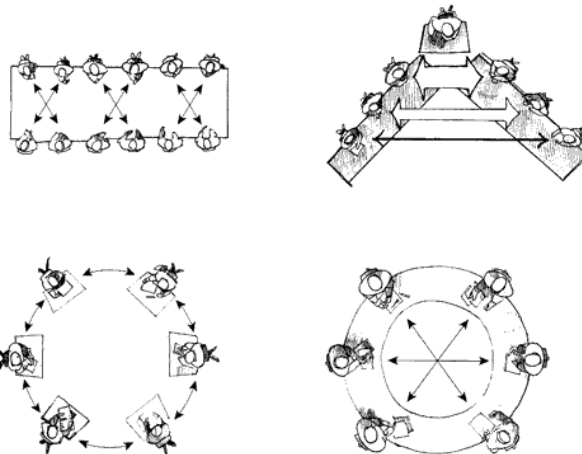
Mcvey, G.F. "Ergonomics and the Learning Environment" in Handbook of Research for Educations and Technology (1996) p.1064.

Seating Arrangements and Social Interaction

Seating arrangements play an important role in determining social interactions in the classroom. Students have been shown to experience greater feelings of equality and uniformity when seated around a rectangular table than when seat at a V- or Y- shaped one (Bass & Klubeck, 1952) In a rectangular arrangement, students tend to speak primarily to those opposite and closet to them. However, as soon as a person is seated at the head of the rectangular table, this interaction pattern changes dramatically; now those seated diagonally across from each tend to engage in conversation about 6 times as often as those directly opposite each other, and about twice as often as those seated side by side (Hall, 1966)

Interaction in circular seating arrangements is affected by placement and distance as well as by postures and other physical impressions individuals make on each other (Steinzor, 1950) Students in small circular arrangements tend to speak to those opposite them, while those in larger circular arrangements. Nevertheless, students generally prefer the circular arrangements without the central authority figure (Leavitt, 1951)

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NON–FORMAL EDUCATION FOR ENHANCING SELF–DIRECTED LEARNING CAPABILITIES OF THAI PEOPLE IN THE YEAR OF B.E. 2555

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Abstract

The main purposes of this research are :

1) To study the expert 's viewpoints on the future image of non-formal education provision and the characteristic development of self-directed learning according to Rosemary S. Caffarella and Dr.Lucy Madsen Guglielmino's viewpoints.

2)   to study a proper means of non-formal education in the future for enhancing self-directed learning capabilities.

The Research Methodology :

The research procedure consisted of a study carried out in the next ten years as a prediction for a plan of non-formal education provision for enhancing self-directed learning capabilities.

1.Questions asking experts' viewpoints were carried out by Delphi Technique with an aim to establish a future trend providing non-formal education for enhancing self-directed learning capabilities of Thai people in the year of B.E. 2555. The sampling groups included experts in self-directed learning and self-directed non-formal education as well as people in community leader groups both formal and informal.

2. Questionnaires were utilized to ask for proper means of non-formal education provision using the Delphi Technique.

3. Application of Rosemary S. Caffarella 's viewpoints in "Planning Programs for Adult Learners" written in 1994 is categorized into 11 steps as follows: 1) Establishing basis for the planning process 2) Identifying program ideas 3) Sorting and prioritizing 4) Developing program objectives 5) Preparing for the transfer of learning 6) Formulating evaluation plans 7) Determining formats, and staff 8) Preparing budgets and marketing plans 9) Designing instructional plans 10) Coordinating facilities and on-site events 11) Communicating the value of the program

4.It is estimated that non-formal education program will definitely assist learners to enhance self-directed learning in consistent with Dr. Lucy Madsen Guglielmino 's viewpoints concerning the characteristics of self-directed learning capabilities of people. These characteristics comprise the following factors: 1) Openness to learning opportunities 2) Self-concept of a self–directed learner 3) Initiative and independence in learning 4) Informed acceptance of responsibility for one's own learning 5) Love of learning 6) Creativity 7) Positive orientation to future 8) Ability to use basic skills and problem-solving skills

5. The researcher used some answers listed in the experts' document to ask the educators, non-formal education experts as well as the local people from the Northern, Central, Eastern, Northeastern and Southern regions to express their viewpoints through focus group discussion.

Non-formal education provision for enhancing self-directed learning capabilities of Thai people in the year of B.E. 2555 is expected to provide its target groups to acquire information in future image of non-formal education provision for enhancing self-directed learning of people as a means to make a decision in establishing

educational policies. In addition, personnel concerned are able to show readiness to provide non-formal education for enhancing self-directed learning; it is a means to establish Thai people 's potentiality in order to live in a successful and happy manner.

Rationale and Significance of Problem

It is an auspicious occasion in education as Thailand has approached the millenium with the proclamation of education reform and Education Act in 1999 which emphasizes on man development based on three principles as follows:

1) Education for all 2) Society participation in education 3) Development of context and learning process on a continuous basis. Moreover, the content in the Education Act obviously reflects that the government has considerably focused on non-formal education, flexibility in models and agencies provided education, equivalency programs of learning (between formal and non-formal education systems) and facilities to provide education, media and infrastructures necessary for utilizing technology for education. All of these approaches are beneficial to education and learning capability of people in non-formal education system.   According to some viewpoints of the Ninth National Economic and Social Development Plan (B.E.2545-2549), based on visions of Thai society in the next 20 years, problem of social sectors at all levels were synthesized and it was found out that particularly for man development aspect, the quality of Thai people education has not been advanced as it should be. The educational level of Thai people aged over 13 years, approximately 70 percent, of them is at elementary and lower. Additionally, our education system and learning process have not been adapted with existing changes. Apparently, they can not produce qualified people with desirable ethics.

Education in Thailand still has numerous problems. For example the number of qualified personnel in science and technology is quite limited. As a result, innovation can not be fully developed and technology can not be utilized effectively either. These problems definitely obstruct Thai people's capabilities of self-development in accordance with economic and social changes. This affects potentiality increase in competition with foreign countries and maintenance of happiness and security in the society.

Therefore, the Ninth National Economic and Social development Plan (B.E.2545-2549) has set up a development plan of local wisdom and learning societies which will provide Thai people with learning opportunities and learning process development. This enables everyone to have knowledge and be aware of upgrading himself on a continuous basis in such a way that he can adapt himself effectively and be competitive with other people in the society forever.

According to the reasons previously mentioned, non-formal education has considerably improved its viewpoints in congruent with education reform schemes and the Ninth National Economic and social development Plan (B.E. 2545-2549). With the main purpose of elevating quality of life and society of people, it has a strong belief that everyone has potentiality to develop himself and his society. Education is conducted on the main principle that all learners are able to learn and develop themselves properly, and learners are regarded the most important. Thus, education processes must enhance learners to be able to develop themselves naturally and potentially. Education must be a learning process undertaken on a continuous basis so that learning process undertaken on a continuous basis so that learners are able to think wisely, adjust themselves properly,

tackle problems ethically and confront with situations existing in various life spans consciously.

Presently, it has been accepted that non-formal education provided for adults and education for all to urge people to pay more attention to self-directed learning. It emphasizes learners on self-directed learning and encourages them to have creative idea to acquire further knowledge. Thus, the learners must set up a plan to study by themselves until they complete the learning process. By realizing the importance of self-directed learning, various educational institutions have developed their own educational processes to promote self-directed learning by conducting teaching and learning process in various fields as well as learning resources in such a way that learners have more choices to learn by themselves according to their needs and skills. Additionally, learners should possess some characteristic. These include self-directed learning and its development. In Thai society, self-directed learning does not occur to everyone, but it is possible to exist in a situation feasible to development.

According to reasons previously mentioned, the researcher is interested in studying the provision of non-formal education for enhancing self-directed learning capabilities of Thai people in the year of B.E.2555. The study in the future will assist us to view feasible events or behaviors in the future as well as methods of self-directed learning. This type of learning can be undertaken
Individually, in-groups by distance education, in enterprises and from various kinds of mass media systems which learners can either learn by themselves or with instructors.

We will see that adult learners are able to employ numerous ways of self-directed-learning. In addition, it is believed that the development of self-directed learning

capabilities will result in personal advancement in various aspects such as learning desire, seeking for appropriate reasons and self-directed learning. All of these will be interrelated due to each individual 's self-directed learning. Importantly, this learning method is consistent with the main concept of learner-centered education suitable with adult maturity in non-formal education system. This self-directed learning skill will be appropriate with the present society in which people have more educational opportunities according to their interests and needs. People are able to use such skill as a tool to seek for further knowledge and advancement all the time. Furthermore, a self-directed person is regarded as a proper source of human development, which enables him to lead his life happily according to his needs.

Therefore, self –directed learning is an appropriate method for adults, which is absolutely consistent with education system in Thailand, Education Act in 1999 and adults' way of life. If Thai people are capable of developing self –directed characteristics potentially, it will help them to have creative thinking with or without other people 's assistance. It also enables them to analyze their learning desire, set up their learning goals, identify learning resource persons ,learning materials, selection of appropriate learning methods, as well as learning evaluation. All of these factors enable people to develop the ability in thinking and decision making, leading to civil society development.

Provision of non-formal education according to Rosemary S. Caffarella's viewpoints

The researcher has applied Rosemary S. Caffarella's ideas in "Planning Programs for Adult Learners" comprising 11 steps as follows:

1.Establishing Basis for the Planing Process

There are two types of factors concerning planning : internal and external. Internal factors include man, culture, and community. External factors include relationship among communities themselves, and between a community and an external agency; politics; economy; society, information as well as building a solid base of support from personnel and agencies for making sure that the program will be accomplished.

2.Identifying Program Ideas

In order to acquire essential contents and ideas, it is necessary to have certain source of such ideas. There are learners, NFE educators, agencies and communities concerned. Methods to obtain ideas from those source are observations, questionnaires, surveys, Interviews etc.

3.Sorting and prioritizing

The ideas obtained are prioritized by taking into consideration who should establish or be concerned with. These people include community leaders, teachers etc. Construction of prioritizing criteria in various aspects is also considered such as numbers of population affected, amount of resources implemented, haste etc.

4.Developing program objectives

Development of program objectives should have a distinctive relationship among objectives, problems and learners' needs. Are these objectives applicable and able to be evaluated?

5.Preparing for the transfer of learning

Some important factors must be considered to transfer learning. These include program participants, design, management, and content; switching of jobs as required, agency context, and forces from communities and societies.

6. Formulation Evaluation plans

It needs to be relevant to objectives. It should be considered about specification of methods evaluated, setting up methods of data collection, data analysis, type of data , data collection, determining criteria used in the program and bringing suggestions to improve the program.

7.Determining format and staff

Determining of suitable format means setting up a self- directed learning format. This includes identification roles of the staff in project planning and management.

8.preparing budgets and marketing plans

This includes revenue sources and estimated cost for carrying out the program as well as planing for program dissemination.

9.Designing instructional plans

This includes improvement of learning objectives, selection and prioritization of content, selection of appropriate teaching techniques, development of teaching interval.

10.Coordimating Facilities and On-site Events

Preparation of facilities such as selection of places, design of classrooms and teaching materials depends on objectives of each type of teaching activities, methods of teaching, learner group, teachers' aptitudes, as well as coordination of the program. This includes gathering authorities concerned in the program, material check-ups, documents and incurred expenditures.

11.Communicating the value of the program

It is a program evaluation report comprising the following factors: functions, scope, audience, content, and format.

The idea of such education program provision is interrelated with men, agencies and communities

Characteristics of self directed learning of people

According to a research on " Development of the self-directed Learning Readiness Scale ", carried out by Guglielmino,Lucy Madsen in1977 has constructed a scale to self-directed learning readiness comprising 8 factors as follow:

1) Openness to learning opportunities

Learners or program participants have opportunities to explore their aptitudes themselves. This means they know what they are able to learn well and they can control themselves to do what should be done. Moreover, they are willing to exchange their ideas with other people.

2) Self –concept of a self-directed learner

Learners are confident to learn by themselves, be able to arrange learning schedules, have good disciplines, learn about adult needs and are eager to learn

3) Initiative and independence in learning

Learners are eager to search for answers of various questions, able to follow up hard problems in a fluent manner, fond of searching for knowledge regularly, confident in working by themselves effectively and have creative ideas for initiating new programs.

4) Informed acceptance of responsibility for one's own learning

Learners realize that their intelligent ability is at medium level or above average. They are willing to learn difficult things within the scope of their interests, admire their crucial roles in setting up learning experience by themselves; and they are able to make a decision in their learning progress.

5) Love of learning

Learners are fond of learning something new regularly, have strong desire to learn and enjoy investigating new knowledge

6) Creativity

Learners are brave to take risks of discovering new and strange learning methods and able to think about a learning method in various ways.

7) Positive orientation to the future

Learners always view themselves as lifelong learning creatures. They like to think about future and regard problems as challenging things, not signs to stop doing.

8) Ability to use basic study and problem –solving skills.

Learners are able to use listening, reading, writing, memorizing and problem-solving skill.

The scale mentioned above has been employed popularly particularly in numerous recent researcher to study the characteristics of self –directed learning of people in various occupations. This research has also applied some trends in the scale as desirable characteristics of people in Thai society.

The Purpose of Study

The main purposes of "the Research of Non-formal education for Enhancing Self –directed Learning Capability of Thai People in the Year of B.E. 2555" are as follows:

1 To study the expert 's viewpoints on the future image of non-formal education provision and the characteristic development of self-directed learning according to Rosemary S. Caffarella and Dr.Lucy Madsen Guglielmino's viewpoints.

2.To study proper means of non-formal education in the future for enhancing self –directed learning capabilities.

The Research Methodology

1. Application of Rosemary S. Caffarella 's viewpoints in "Planning Programs for Adult Learners" written in 1994 is categorized into 11 steps as follows: 1) Establishing basis for the planning process 2) Identifying program ideas 3) Sorting and prioritizing 4) Developing program objectives 5) Preparing for the transfer of learning 6) Formulating evaluation plans 7) Determining formats, and staff 8) Preparing budgets and marketing plans 9) Designing instructional plans 10) Coordinating facilities and on-site events 11) Communicating the value of the program

2.It is estimated that non-formal education program will definitely assist learners to enhance self-directed learning in consistent with Dr.Lucy Madsen Guglielmino 's viewpoints concerning the characteristics of self-directed learning capabilities of people. These characteristics comprise the following factors: 1) Openness to learning opportunities 2) Self-concept of a self–directed learner 3) Initiative and independence in learning 4) Informed acceptance of responsibility for one's own learning

5) Love of learning 6) Creativity 7) Positive orientation to future 8) Ability to use basic skills and problem-solving skills

3.Asking experts for viewpoints using the Delphi Technique

4.The sampling groups comprise of experts in self-directed learning and self-directed learning and self-directed education provision as well as people who are in community leader groups, formal and informal.

5.Use questions listed in a document to ask education experts and non-formal education experts as well as local people from the Northern, Central, Eastern, Northeastern and Southern regions to express their viewpoints through focus group discussion.

Definitions Used in the Research

Non-formal education means learning activities provided in non-formal education system with flexible formats suitable with learners' needs and based on the philosophy stating that "Education is life and life is education". Its main purpose is to develop people to think and be able to make decisions wisely; know how to learn by themselves; and be free from environment surrounding them as much as possible. As Non-formal education plays an important role in making people's lives more complete, it should be provided for all in the society as basic knowledge for their living. It aims at encouraging target groups to develop learning processes, be able to think critically, tackle problems and search for knowledge and information needed for their decision making and livelihood.

Such knowledge helps them to keep pace with social changes.

Self-directed learning means a learning process in which learners initiate their own learning methods by identifying their requirements, setting up goals and learning materials, contacting resource persons, searching for learning resources, selecting supplement learning strategies and evaluating their learning with or without assistance from others.

People means grown-ups in working age beyond twenty-five, both sexes with Thai nationality and have residence in Thailand

Expected Outcomes

1.Acquire information in future image of non-formal education provision for enhancing self-directed learning of people as a means to make a decision in establishing educational policies.

2.Personel concerned are able to show readiness to provide non-formal education for enhancing self-directed learning.

3.It is a means to establish Thai people in potentiality in order to live in a successful and happy manner.

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http:www.onnec.go.th

PROCEEDINGS   THEME 1   THEME 2   THEME 3   THEME 4

COOPERATIVE LEARNING: AN INNOVATIVE ALTERNATIVE TO THE TEACHING AND LEARNING OF ENGLISH IN THE CLASSROOM

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Abstract

This paper sets to present and discuss the findings of a study that seeks to determine the usefulness or effectiveness of Cooperative Learning. Cooperative learning is seen here not as the only method of teaching and learning English in the classroom, but as an alternative to the traditional method. Although numerous researches have been conducted overseas to prove the effectiveness of cooperative learning in increasing students' proficiency in English, the same cannot be said in the Malaysian context. However, it should be noted that this study is not an attempt to compare the effects of cooperative learning with the traditional method of teaching and learning English. This study is an attempt to see whether cooperative learning is favorable to both teachers and students, as well as to gauge its effectiveness from these two parties' points of view. As such, the study employs both quantitative and qualitative methods of data collection. A Form-One class of a secondary school was used as the sample of the study, whereby English lessons were taught using several cooperative learning strategies interspersed with traditional approach of teaching. At the end of the four-week period of study, an interview was conducted with the teacher to get her perception regarding the effectiveness of cooperative learning as a teaching methodology in the classroom. As for the students' perception of cooperative learning as a suitable learning methodology, quantitative data was collected in the form of questionnaires distributed to all of them at the end of the

study. From the data collected, it can be summed up that cooperative learning has instilled and increased students' intrinsic motivation to learn, helped to create more positive relationships among them, produced a healthier teacher-student relationship, helped improve students' social development, and finally increased their confidence and self-esteem. From these findings, it can be concluded that the best place to foster a cooperative learning environment is the cooperative learning classroom itself. Therefore, the implication of this study is that cooperative learning is a very suitable and effective alternative approach to be used in the teaching and learning of English in Malaysia.

Introduction

Over the last ten years, cooperative learning which is very much based on the constructive paradigm, has grown to be one of the most popular approaches in the classroom throughout the world. This new approach to teaching and learning is based on the group work concept, and involves students working collaboratively and cooperatively in groups or teams. It is not only useful for one particular subject matter, but is suitable and has been proven to be successful for all disciplines. In fact, many of the works done by Johnson and Johnson (1987, 1988, 1989, 1993, 1994) suggest that this approach overshadows the former practice of students working as academic loners in the classroom.

Researches, particularly overseas, have proven cooperative learning to be an effective tool for the teaching and learning of English. It should also be stressed here that cooperative learning is applicable for the teaching any of the four skills in English, be it

listening, speaking, reading or writing. However, as English language teachers we should be clear of what the term "cooperative learning" really involves or adheres to, and not fallen into the trap of simply labeling any group work or tasks as cooperative learning. As such, it is deemed proper that we take a closer look at what cooperative learning actually entails.

What Is Cooperative Learning

Cooperation among members of a group means working together towards achieving some similar objectives. Johnson, Johnson and Holubec (1994) defines cooperative learning as *"...the instructional use of small groups through which students work together to maximize their own and each other's learning"*. Therefore, in a cooperative learning situation, students work in small groups to solve certain tasks assigned by the teacher. Upon completion of the tasks, learning takes place not only in an individual student, but information is shared with everyone in the class. In such a situation, members depend on each other for success, while failure is also very much attributable to everyone.

Jacobs, Gan and Ball (1995) adapt the definition of cooperative learning offered by Davidson (1990), and concluded that cooperative learning should have certain characteristics or features. Among them are that the groups should be heterogeneous ones, collaborative skills should be taught explicitly, there should be a specific task for the group to complete, discuss and form some resolutions, there should exist face-to-face interaction in small groups, there should be cooperation in small groups and support among members, there should be mutual independence among members, and finally there

should be individual accountability, i.e. each member should contribute during the discussions.

The above characteristics of cooperative learning comprehensively covers the key concepts of the approach, which not only distinguish it from the traditional method of learning in groups, but also highlight its unique features which contribute to learner success. As ESL teachers, we should always remember that although cooperative learning is gaining popularity, care should be taken to ensure that the group activities we prepare are really and truly cooperative learning group tasks. We should realize that there is "a crucial difference between simply putting students into groups to learn and in structuring cooperative interdependence among our students" (Johnson and Johnson, 1987, page 12). Teachers should also be aware that cooperative learning is not only having students sit at the same table or side by side and discuss some assignments given by the teacher (ibid, 1987). For instance, cooperative learning does not occur in a situation where only one student does all the work while the rest simply claim the work is theirs as well.

Cooperation in the true sense of the word goes beyond a situation where students just sit next to each other and discuss an issue or a task (Johnson and Johnson, 1987). As teachers, we should always remind ourselves that just because students are requested to work in small groups does not boil down to the fact that they are working and cooperating to ensure both their own and also the success of their group members. This is an essential element or requirement of cooperative learning, since it is the very feature that differentiates it from the normal working in groups. All these can be neatly summed up according to what Slavin (1990) said, i.e. in cooperative learning, the emphasis is on

the academic learning success not only of every individual, and also of all the members of the groups.

Basic Elements of Cooperative Learning

Based on the definitions of cooperative learning and what it actually entails, we can say that basically there are four main features of cooperative learning, which distinguish it from normal group work. The basic elements are:

1. Positive interdependence

This is where as group members, students must perceive that they either "sink or swim together" (Johnson and Johnson, 1987, page 12). This requires that students should be made to realize that their learning goals would only be achieved if the other students also achieve their goals (Deutsch, 1962). Group members should therefore know that they would succeed in their tasks if and when they work together. There will be no cooperation if there is no positive interdependence, since the latter promotes the desire to succeed and to see other group members succeed as well.

2. Shared goals

Members of each group work together towards achieving a common goal, the outcome of which is not only shared by them, but also with members of all the other groups (Johnson and Johnson, 1987). For example, the shared goal of an English language lesson is to enable students to write a composition entitled *The Festivals in Malaysia.* At the end of the lesson, after performing some cooperative tasks set by the teacher in groups and discussing them with each other, everyone in the class should he able to write the essay. An important consideration to be made by the teacher while setting the tasks is to ensure

that the goals of all groups are similar, since this would lead to more cooperation and active participation among group members.

3.   Individual accountability

This means that each member is expected to contribute his or her share of the work. In other words, there should be no hitchhikers in the group (Johnson and Johnson, 1993). Individual accountability exists when a student's performance is assessed and then the teacher let him or her know the results. This information may be useful to the teacher to find out which students need further help, perhaps in terms of remedial work.

4.   The appropriate use of interpersonal and small group skills

Success is not guaranteed by simply putting socially unskilled students in a learning group and telling them to cooperate (Johnson and Johnson, 1987). In other words, it means that students must be taught the social skills required in collaborative learning, and they must also be encouraged to use them. Cooperation also occurs when members discuss and evaluate the group's success or failure in achieving the set goals, and then employ their social skills in planning how to improve their group's functioning. Members are also encouraged to strive for and maintain healthy working relationships among them.

Cooperative Learning Skills

Next, let's take a look at some cooperative skills which ESL teachers should be aware of to avoid confusion with ordinary group work. Firstly, teachers should remember that social skills are learned by students, not inherited. Therefore, students should be given ample time and opportunities to understand and use the relevant cooperative skills. In time, with proper guidance and encouragement from teachers, they will understand and

master these skills. An important thing teachers should do is to ensure that the process of teaching all these skills is similar for every student. Teachers should explain these skills as explicitly as possible, provide sufficient opportunities for students to practice them in the ESL class, and then allow them to provide feedback as to how effectively they have used these cooperative skills.

Johnson and Johnson (1987) categorized cooperative skills into four major areas. They are:

1. **Forming groups**

   The teacher should encourage heterogeneous groups to be formed, since this would ensure that students have the opportunities to help and learn more about their friends who are from different ability groups, different gender, or from diverse cultural backgrounds.

2. **Working as a group**

   Assigning group members with different roles would foster the use of cooperative skills in a group. Some of the roles students can assume are as a questioner, a summarizer, an organizer, a timekeeper, an observer, or a note-taker.

3. **Problem solving as a group**

   Some of the cooperative skills students can use to solve problems in the ESL classroom are brainstorming, identifying and analyzing problems, clarification, solving problems, making predictions and elaborating ideas.

4. **Managing differences**

   The approach students can use here may be to analyze problems from several perspectives in order to try strike a compromise. The skills involved are com-

promising, analyzing the problem from another person's point of view, negotiating, and coming to an agreement.

Research Objectives

This study seeks to determine the usefulness or effectiveness of cooperative learning as an alternative to the traditional method of teaching and learning English in the classroom. Hence it should be stressed here that this study does not attempt to compare the cooperative learning method as opposed to the traditional method. The first objective of the study is to determine whether cooperative learning instills and increases intrinsic and achievement motivation among students to learn English, and the second is to determine whether it provides students with more opportunities for greater language use in class. The third objective is to see if cooperative learning improves students' thinking skills This is in line with the government's policy of inculcating thinking skills among the students, which aims to sharpen their thinking and understanding skills. The next objective of the study is to determine whether cooperative learning helps to foster more positive relationships among students and increases the opportunity for them to learn from each other. This study also aims to see whether cooperative learning produces a healthier teacher-student relationship. Although many studies conducted overseas show positive results with regards to the effectiveness of cooperative learning, their findings are not really consistent and cannot be assumed to be representative of our local situation. Therefore, the main objective of this study is to determine the relevance and usefulness of cooperative learning in the learning of English in Malaysia.

Research Methodology

This study employs both quantitative and qualitative methods of data collection. A Form One class of a secondary school in Penang was used as the sample of the study. The class enrolment was 44 students of mixed gender, and this particular sample was selected based on two main criteria: the students are from a multi-racial component and they are of mixed ability groups. This mixed ability criteria is a crucial consideration when placing students into heterogeneous groups, which in turn is an important feature in forming cooperative learning groups.

The class English teacher was given instructions and a brief 'training' session on how to conduct her lessons using the more popular cooperative learning techniques. These techniques include Jig Saw, Numbered Heads Together, Round Robin, Think-Pair-Share, etc. For the rest of the English lessons during the four-week study period, the teacher used the usual traditional method of teaching. In his review, Slavin (1983) believes that a study or an experiment conducted for a period of at least two weeks is sufficient to determine the effects of cooperative learning on students' achievement. For this study, the researcher decides that a four-week period is adequate since the teacher not only used cooperative learning method throughout, but interspersed her lessons using the traditional method of teaching as well.

Research Instrument

An interviews was conducted with the teacher who related her experiences and expressed her observations and opinions towards the use of cooperative learning in teaching and learning. Quantitatively, a questionnaire was administrated to all the students in the class

on the last day of this study. Care was taken to make sure that students respond appropriately and correctly to the items in the questionnaire, and the teacher was present throughout the whole session to assist students should they face problems. The main purpose of the questionnaire was to ascertain students' perceptions of cooperative learning as an effective method for the learning of English.

Research Procedure

The next step is to collect data or information required for the study. All the information were collected through two primary sources of information i.e an interview and a questionnaire. After obtaining permission from the authorities to conduct the study, discussions were made with the school principal and the teacher involved as regards to the class most suitable to be used as the sample of the study. Form One Baiduri was short listed as the sample after consideration of a few criteria vital to the study, among which are the composition of the class in terms of gender, race and ability levels. This class consisted of both male and female students of Malay, Chinese and Indian origins, and they were also of mixed ability.

Next, discussions were made with the teacher concerned as to how many and which lessons were to be conducted via cooperative method, which units or items from the syllabus were to be selected, and which strategies were to be used. It was decided that out of the four-week period of the study, more time would be spent on the cooperative learning method than traditional method of teaching. Lesson plans and materials such as reading passages, notes, exercises and quiz questions which were to be prepared before the study began were also discussed with the teacher. The teacher's opinion was

consulted to ensure the lesson plans and materials were really suitable for the sample of the study. Once they were ready, another meeting was held during which the teacher was briefed and trained on how each strategy works, and a few books on cooperative learning were made available to familiarize her with the strategies. The study began two weeks after this meeting to give the teacher ample time to read, understand and practice these cooperative learning strategies.

Since the total enrolment in the class was 44 students, they were neatly placed into eleven groups, each group consisting of four members. As cooperative learning groups should be heterogeneous in composition, care was taken to ensure that the four members in a group are from different ability levels, based on the students' performance in the Ujian Penilaian Sekolah Rendah or UPSR (a national standardized examination). The grouping of students was done based on the procedure suggested by Slavin (1990). As such, each group consisted of one student from the high-achiever category, two from the middle-achiever category, and one from the low-achiever group. Since the study was only for a period of four weeks, all the members remain in the same the groups throughout the study. This is to create and retain familiarity among group members, which would ultimately lead to consistency in the findings of the study.

The data in this study were collected through two forms, i.e. quantitatively and qualitatively. The quantitative data were collected through the administration of questionnaires to the students. Samples' responses were processed and analyzed using the SPSS package, and the central tendency and frequency distribution were used for the quantitative data.

The qualitative data were obtained via an interview with the teacher involved in the study. The data were then analyzed based on the steps proposed by Strauss and Corbin (1995). The subject's responses were recorded and then read many times to ascertain the main categories into which they are to be placed. As an example, for the question that required the teacher to describe the experiences she had when teaching using the different strategies under the cooperative learning method, the researcher concluded that these experiences could be grouped under three main categories, i.e. positive experiences, mixed experiences, and negative experiences. The content analysis technique was also used while analyzing the qualitative data. This technique was employed to interpret both the indicated and underlying responses of the subject (Berg, 1998). Using this technique, the researcher was able to identify recurring phrases, and report them under appropriate categories or characteristics.

Findings of the Study and Discussion

The findings of this study will be presented and discussed based on the two sets of data obtained via the two methods of data collection, i.e. quantitative and qualitative. The first set of findings was based on data obtained from the questionnaire administered to the students. Generally, they depict the respondents' positive perceptions of the effectiveness of cooperative learning. This is because for most of the items in the questionnaire, the 44 respondents indicated very positive responses i.e. by agreeing or strongly agreeing with the statements.

For the first item, that is whether they find learning English through cooperative learning is interesting, a majority of the students (80%) responded positively. The same

goes for the second item, where most of the respondents (90%) find it easier learning English via cooperative learning. For the third item, about 80% of them answered positively, which indicates that they do enjoy working with friends in small groups. The same percentage was recorded for the fourth item which depicts students' perception that they can converse better in English because of the opportunities they had while discussing with friends during cooperative learning lessons.

Very positive responses were also recorded by the respondents for items referring to their feelings towards cooperative learning strategies, when 85% of them said that they are always happy when the teacher uses them in class. In fact, a majority of them (80%) always look forward to learning English via the cooperative learning strategies. Therefore, it can be said at this point that all these favorable feelings towards cooperative learning also help to improve students' relationships with each other, since about 60% of them said that they would always seek their group members' assistance if they face any problems during discussions, while the same percentage of them (60%) regard their group members as friendly and helpful. All these developments can be attributed to cooperative learning strategies used in class, and in fact a large number of the students (85%) were more confident or felt less shy to speak not only in their individual groups, but also in front of all their friends in class.

The teacher was also regarded as a significant factor that contributes to the success of cooperative learning in the classroom. A high percentage of the respondents (87%) recorded that they would always seek the teacher's help if they encounter problems in understanding something, and this was due to their perception that she was very helpful when they were working in groups. The positive contributions of the teacher

in making cooperative learning successful was reinforced by the respondents when about 60% of them stated their belief that their English has improved due to the teacher's help and guidance.

However, for some of the items in the questionnaire, the respondents recorded negative responses. One item asked the respondents whether it was easy for them to understand how the cooperative learning strategies work, and about 80% of them answered in the negative. Two findings contradicted responses students made earlier regarding improvements in their English language skills. As mentioned earlier, a majority of the respondents said that they could speak English better after going through cooperative learning lessons. However the same view was not shared by many of them as far as reading and writing skills are concerned. This was reflected in their responses when only 30% agreed that cooperative learning strategies helped improve their reading skills, while 90% strongly disagreed that it was easier for them to write essays after having discussed the topics with their group mates.

The second part of the presentation and discussion of the findings of the study will be based on the teacher's responses and feedback during the interview session conducted. Generally, it can be summarized that the teacher believes that cooperative learning has been successful in producing positive responses and behavior from the students.

The first observation she made was that the students enjoyed their lessons more because the learning environment in the class was more interesting. She related this to students' eagerness to participate in group discussions and also regular interactions that took place among group members. This led to more of them paying attention and

participating not only in discussions in their own groups, but also when they had to present to the whole class.

The second observation made by the teacher was that students were more motivated to learn, mainly because they enjoyed working in groups. They seemed to find learning English less frightening and burdening, and so many of them would make the effort to prepare for the lessons and also found materials needed for class use. This led to many of them being more motivated to answer questions and take part in class activities because they were more prepared. The teacher also attributed this to the fact that students found it easier to understand the topics presented by the teacher, which in turn enabled them to follow the lessons better.

Next, the teacher observed that cooperative learning also helped instill more self-confidence and higher self-esteem among the students. Being able to discuss and consult other members of the group made them less inhibited to speak up and contribute ideas. Not only that, cooperative learning also allowed students to evaluate their strengths and weaknesses in relation to other group members, and this provoked them to try develop and improve themselves accordingly.

Last but not least, the teacher found that students did not give up on a task or assignment easily. This was attributed to the fact that students no longer felt bored or burdened by them, but instead they found it more challenging to discuss with friends, or to consult her on matters they don't understand. According to the teacher, the main difference she noticed in the students' attitude when learning via cooperative learning is that they approached her more regularly to discuss and ask questions than during the traditional type of lessons. This factor not only made her contented, but she believed that

it would ultimate lead to the students themselves feeling happy and satisfied with the learning environment.

However, the teacher also observed some negative outcomes of cooperative learning, which she believed could be improved or solved through time. Firstly was the issue of getting familiar or adjusting to the cooperative learning strategies. In fact, she admitted that she herself faced some difficulties in the initial stage, particularly in understanding and getting familiar with some of the steps or processes involved. However, after some time, she found it easier to conduct English lessons using cooperative learning method compared to the traditional method of teaching.

As for the students, she noticed that some of them faced the same problem of getting familiar to the strategies in the beginning. However, after a few lessons, they seemed to get the grasp of things and so could follow instructions and carry out the tasks assigned. Nevertheless, some students took longer to understand, and this led them to feeling bored or restless during class. After being exposed to cooperative learning activities for some time, they slowly adapted to it, and in time they actually enjoyed these activities.

Another phenomenon the teacher observed in the beginning of the study was that some of the students found it difficult to work with each other in the groups they've been assigned to. This led to a few minor problems such as passive participation among some group members, or a few of them monopolized the discussion sessions. However, after some advice and guidance, this problem lessened and more students became actively involved in group discussion and class participation, although a few remained passive until the end of the study.

5.0 Conclusion

From the above findings of the study, a few conclusions can be arrived at. The first is that cooperative learning creates and increases intrinsic and achievement motivation in the learners. Cooperative learning proves to be an effective approach in getting students involved in class activities and discussions. It also produces confidence in the students to participate in a language class, where even the low achievers would try to be involved in the tasks assigned by the teacher.

Secondly, cooperative learning helps to create more positive relationships among students. It implies that cooperative learning strengthens students' personal and academic support for each other and improves their relationships as group members. All these can be linked to the positive interdependence and individual accountability features of cooperative learning groups, which ensure students' continued participation and interest in the lessons.

Thirdly, cooperative learning produces a healthier teacher-student relationship, where the learner looks upon the teacher not only as someone who imparts knowledge, but more of a guide to learning. In the cooperative classroom, learning takes place in a more relaxed atmosphere since the teacher acts more as a facilitator than a *"prosecutor"* of information. The students are at their ease in the class, and they feel relaxed and comfortable not only among members of their groups, but also in the teacher's presence. All these in turn stimulate more interaction amongst them in the cooperative groups, and ensure more participation in class activities.

Finally, it can be concluded that cooperative learning would be an effective alternative approach to stimulate English language learning among students in the class.

All the above discussions also show that the best place to create a healthy cooperative learning environment is of course the cooperative classroom itself. This is because small groups usually provide a better opportunity for developing students' learning abilities (Reid, Forrestal and Cook, 1989). However, teachers should make sure that they set up the learning situations in the classroom according to the principles and procedures of cooperative learning. This means that they themselves must be sure of these principles and procedures first, so as to avoid falling into the "trap" of using the traditional learning groups but mistaking it for cooperative learning groups.

The implication of this study is that cooperative learning is suitable and effective to be used in the Malaysian classroom. However this is not saying that it is the only method that should be used. Rather, this study proves that cooperative learning is an innovative alternative to the teaching and learning of English in the classroom.

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DIPLOMA IN ACCOUNTANCY STUDENT'S PERCEPTION TOWARD INDUSTRIAL TRAINING PROGRAMME: A CASE STUDY

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Abstract

Industrial training is a commendable program and has been part of the curriculum for certificate and diploma level at all the polytechnics in Malaysia. The primary purpose of this study was to develop an understanding of the perceptions of Diploma in Accountancy students from Politeknik Sultan Abdul Halim Mu'adzam Shah, Jitra regarding the industrial training program. The respondents were 92 final year students who had gone industrial training during their fourth semester. Questionnaires had been distributed in order to obtain data and SPSS 10.0 for Windows (Statistical Package for the Social Science version 10.0) program was used to analyze the data. Quantitative method was used to address the research objectives of the study. In addition, descriptive statistic was used to analyze the students' perception of this program. From the result of this study, findings related to the effectiveness and contributions of the industrial training program are reported. All of the respondents have had a positive perception towards the program. Five primary themes emerged associated with the effectiveness and contributions of the industrial training program to the accountancy students. There are (a) giving students insight and exposure into the world of work; (b) linking theory to practice; (c) helping students to develop interpersonal, social and technical skills; (d)

enhancing students knowledge and motivating their learning; and (e) placing students in a position to confirm their ability and validating the correctness of choosing accounting course.

In order to achieve the status of a developed industrialized nation by the year 2020, the government, under the helm of the Prime Minister YAB Dato' Seri Dr. Mahathir Mohamed, has planned and embarked on a promising venture called Vision 2020. among others, it is the aim of the vision to nurture a Malaysian society that can benefit from the advent of technology and also to form a culture of excellence in science and technology for the future – a most crucial ingredient for success of the future (Shahril and Habib, 1999).

Among the many elements, the most crucial ones would of course be the human factor. It is with the skill and ability to manipulate the available other resources that Malaysia can realize its vision of becoming a developed nation as envisaged. It is therefore, important that focus be given to the development of human resource both in the soft and hard skills; communication, technical training and other kinds of support.

It cannot be denied that our country has the necessary educational infrastructural facilities that provides technical trainings; schools, polytechnics, colleges and universities. Nevertheless, relative to the high demand for qualified and skilled graduates the number produced is still insufficient. It is thus crucial for Malaysia to overcome this

problem and one of the ways being establishing more polytechnics hence increase the desired number of trained technical and vocational man power supply.

At polytechnic level, students have to follow a curriculum that includes industrial training. Every student is required to undergo and pass the industrial training phase that runs for a minimum of one full semester (six months). This is implemented in the third semester of their study at certificate level and at the fourth semester for diploma level. The main objective of the training is to expose students to the practical aspect of their technical and vocational training applying as much as possible the theoretical knowledge learned in class.

But the question is "Are our polytechnics able to produce *"the"* kind of competent and skilled graduates to meet the needs of the highly technical industrial sector? According to Shahril and Habib (1999). "Our technical and vocational training centers only focus on the theoretical aspect of the curriculum giving less attention to the more needed aspect of which is the practical competence".

Another problem that needed dire attention is the weakness of the educational system itself that gives too much attention to academic aspect both at secondary and tertiary levels. For instance, 70 % of Malaysian students are following courses in the social sciences and only a mere 30 % in technical and vocational courses the opposite of that practiced by other developed nations.

One of the vocational courses offered at our Malaysian polytechnics is a course in accounting. This course calls for a high level of competence both theoretically and in practice. The Education and Training Journal (1990) revels that many accounting graduates still lack practical accounting skill despite their high command of the theoretical aspect. This means that they were not given enough exposure and training in the practical aspect. Oliver and Que (1996) state that one of the weaknesses of technical and vocational institutions is the lack of industrial trainings given to students. This is due to the incompatibility of demand and supply between the educational curriculum and the needs of the industrial sector. In addition, Nicholson and Moss (1990) reveal that one of the many reasons that lead to unemployment among many technical students is the incompatibility of their skill and that required by industries.

According to Prosper (Dennis, 1996) most accounting firms prefer qualified employees to help them maintain minimum wage cost. Based on Armanjaya's study (2000), industrial training has succeeded to produce qualified graduates for the industrial sector. Nevertheless, he added that there is no link between the theory and practice learned by trainees with the things they discover during industrial training.

According to Ismail (1999) industrial training could help students to sharpen on their technical skill, knowledge, experience and ability to understand their course better. Noorul ' Ashikin (2000) agreed that industrial training has given positive results to Polytechnic Kuching accountancy graduates. In addition, industrial training could help

trainees in enhancing their soft skills, another most crucial element for a well-rounded skilled graduate; communication, attitude, confidence and work efficiency.

Objectives of Study

- To identify the extent by which industrial training has helped students to prepare for the real working world
- To identify the existence of a relationship between industrial training and theoretical and practical aspects
- To identify the extent by which industrial training has helped students to improve on their skills
- To identify the extent by which industrial training has helped improve and enhance students on their study of the related subjects
- To identify the extent by which industrial training could help increase students' confidence in terms of accounting skills

Research Method

This research was conducted using questionnaires. The respondents were Diploma in Accountancy students of POLIMAS who had undergone six months of industrial training. Out of a population of 112 people a sample of 92 persons based on Krejeie and Morgan determination sampling size was selected.

At the pioneer stage of research, the researcher conducted statistical analysis to determine compatible of questionnaire as the instrument of research. The statistical analysis that has been chosen for this research was Alpha Cronbanch that was more exact to be analyzed SPSS 10.0 for Windows software. The result shows that compatibility of the instrument was at Alpha 0.92. According to Uma (1992) the compatibility of the instrument was high, over 0.6.

Findings

Research findings are as below;

Table 1: Descriptive analysis of respondent's perception towards industrial training in exposing them to real working environment.

Item	Mean	Standard deviation
Exposure to working needs after completing study.	4.41	0.63
Awareness on importance of discipline among students in each work performed	4.33	0.54
Challenge at work place taught the trainee to be flexible in their daily working routines	3.91	0.66
Working environment teaches the trainee about time management.	4.21	0.69
Industrial training helps trainee to understand the importance of cooperation in performing tasks.	4.17	0.64
Industrial training exposes the trainee to the regulations and rules of	4.17	0.67

a real working environment.		
Industrial training exposes the trainee towards having positive attitude in their life.	4.20	0.68
Total mean	4.20	0.37

From Table 1, the overall mean of the first research statement objective is 4.20. It shows that respondents agreed to the statement that industrial training programme could give them exposure to real life working condition. Based on the mean reported for each item above, the exposure to work needs after student-graduated item is the most dominant - 4.41. On the other hand, the least dominant item is the third, i.e. challenge in the workplace teaches the students to be flexible in their life, with a mean of 3.91. The Standard Deviation (SD) for all items is 0.37. It means the respondents perception to the contribution of industrial training in giving them exposure in real working environment is focused.

Table 2: Descriptive analysis on impact of Industrial Training in associating between theory and practical to respondent.

Item	Mean	Standard deviation
Industrial training helps the trainee to understand the association between theory and practical.	4.26	0.63
Industrial training helps the trainee to adopt and implement the skill and knowledge that they had.	3.75	0.79
Industrial training helps the trainee to understand accounting terminology related to their work while performing tasks.	3.88	0.74

Programme syllabus enable trainee perform the training well.	3.66	0.88
Theoretical knowledge that the trainee had learned helps them, to perform the training very well.	3.66	0.99
The tasks performed during the training are relevant to the knowledge gained in Polytechnic.	3.46	0.95
Industrial training helps the trainee to understand better about the scope and nature of work performed.	4.02	0.73
Total mean	3.81	0.59

Based on Table 2, the item on "Industrial training helps students in understanding relation between practice and theory" is most dominant with a reported mean of 4.26. In addition, the second highest mean at 4.02 is for the item that states "Industrial training helps the trainee to understand better about the scope and nature of work performed. Industrial training helps students understanding accounting terminology related to their work item shows a mean of 3.88, while industrial training helps students in applying all skills and knowledge item mean is 3.75, mean for program syllabus followed enable student to quickly master their training easier and faster which is 3.66. Lowest mean are 3.46 for student assignment suitable to their knowledge gained in Polytechnic. Overall mean reported for this second research is 3.81. This means that the respondents agree that industrial training can contribute towards providing the link between theory and practice. SD for overall mean is 0.59 showing a common perception.

Table 3: Descriptive analysis of respondents' perceptions towards the contribution of industrial training in developing students' skills.

Items	Mean	Standard deviation
Industrial training enables students to acquire technical skills in accountancy	4.08	0.73
Industrial training helps students in upgrading communication skills	4.21	0.62
Industrial training helps students in solving a problem creatively	3.79	0.79
Industrial training enables students to manage themselves effectively.	4.05	0.62
Industrial training upgrades students' social relationships.	4.25	0.66
Industrial training helps students in understanding the needs of self-upgrading in career.	4.09	0.60
Industrial training helps students in developing teamwork skills.	4.07	0.45
Total mean	4.07	0.45

Table 3 shows the total mean of the statement of research objectives is 4.07 and the mean score for each item is between 3.5 to 4.4. This result shows that the respondents agreed with the statement saying industrial training can help build students' skills. The item stating that industrial training upgrades students' social relationships is the dominant item with a mean of 4.25. On the other hand, the least dominant is the third item, stating that industrial training helps students in solving problems effectively, with a mean of 3.79. The standard deviation for total mean is 0.45. This suggests that respondents' perspectives towards the contribution of industrial training in developing students' skills focus on one scale only, where they agreed with the statement.

Table 4: Descriptive analysis of respondents' perceptions towards the contribution of industrial training in adding students' knowledge and influencing students' learning.

Items	Mean	Standard deviation
Industrial training can strengthen students' knowledge in accountancy.	3.97	0.70
Industrial training enables students to acquire new and latest knowledge.	4.30	0.61
Industrial training helps students to participate more in the classroom learning.	3.85	0.77
Industrial learning helps students to practice effective learning styles	3.59	0.80
Industrial training opens students' minds to understand the opportunities in accountancy field widely.	4.12	0.68
Industrial training enables students to understand clearly the work related to accountancy field.	3.95	0.76
Industrial training motivates students to learn and plan to continue education to a higher level.	4.10	0.79
Total mean	3.98	0.50

Based on Table 4 above, the overall mean is 0.50. This means students' perception towards industrial training in increasing students' knowledge and influencing on their learning process is central.

Table 5: Descriptive analysis of respondents' perception towards contribution of industrial training in nurturing confidence among accountancy students

Item	Mean	Standard Deviation
Industrial training builds high confidence in students ability	3.98	0.70
Industrial training makes students more determined and confident to face the lessons that follows in the next semester	3.79	0.81
Industrial training increases students' commitment towards a career in accountancy	3.77	0.79
Industrial training provides confidence among students to perform jobs well in the real working environment	4.01	0.69
Industrial training increases the confidence of students to condition themselves with work requirements.	4.05	0.60
Industrial training increases students confidence in learning the accounting course attended	3.86	0.74
Industrial training helps students to build general self confidence to succeed in the academic programme they pursue	3.98	0.90
Overall Mean	3.92	0.52

Based on Table 5, the overall mean shows that the respondents agree industrial training programme can help develop confidence among students in terms of self management and accounting course. SD for the overall mean is 0.52 which gives a central view on the matter.

Suggestions

Based on the findings, there are several conclusions and suggestions made:

a) Polytechnic authorities should review the present curriculum for Diploma in Accountancy programme to ensure that it meets the needs of the industrial sector.

b) Relation and Industrial Training Unit (Unit Perhubungan dan Latihan Industri)

    needs to seek cooperation from the firms which have links with industrial training in order to provide the appropriate training programmes to the students who are having the practical in their organization.

c) The firms which lead to the successful of this program are hopefully can spend more time to guide the students in performing their tasks. The rationale is to make the students having the environment of a systematic training and face no conflict or hardship in this programme.

d) Lecturers are also encouraged to join this industrial training at the firms involved to fulfill the needs of industry. Thus, they can have the usual lectures as well as certain skills to make the teachings relevant to the real needs of industry.

e) Hopefully the students are positive towards these programmes and have the initiative to grab the opportunities. They should show their interest in the trainings and give full commitment. They should realize the importance of having these training industries.

f) Future researchers are hopefully can strengthen their studies to get the large size of sample. This means they can enlarge the sample to the respondents not only among the students who are in the training programmes but those who involve in this programme such as the firms which accept the students to do the practical and the lecturers to observe the students. The findings are more meaningful to the polytechnics as the guidelines to list down the criteria of the future industrial training. Other than that, the advantages go to the firms to identify the aspects that should be improved in order to upgrade the quality of industrial trainings.

g) The scope of studies should be widen by the involvement of several polytechnics under the Ministry of Education. This is to have the overall findings and comparison on the effect of the industrial training programmes among the polytechnics.

Conclusions

The general findings show positive reactions, parallel with the aims of the study and the previous research which have relations to the effects and contribution of the programmes.

The exposure of industrial trainings lead the students to be disciplined and make them realize the importance of time management, rules and cooperation in any working field. Other than that, this exposure gives the students a chance to be positive and can adjust themselves in life. Definitely the exposure is really meaningful to the students because the first experience leads the way to gain more experience with more confidence.

Industrial training programmes are identified to link the theories and practical. Through this programme, it gives chances to the students to relate their theoretical knowledge and skill that they learn in polytechnics and apply them in the real world of working. At the same time, this programme helps students to identify their knowledge which are suitable with what should be applied in the industry. If the students can accept and performed the task well, fast and easy, this means the students' level of knowledge is relevant to the practical in the working world.

It cannot be denied that the industrial training programme has given benefits to the Diploma of Accountancy students especially in developing their technical and soft skills. This is the answer for the third question of this study. The findings show that the skills gained from this programme are the skills that fulfill the needs of the industry. This

includes the technical skill in accounting, social and interpersonal skills, creative problem

solving skill, self management skill and career development. In summary, there is indeed

a need for more updates industrial training programmes for effective results.

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PROCEEDINGS   THEME 1   THEME 2   THEME 3   THEME 4

METAPHORICAL THINKING AND ACTION LEARNING (MTAL) IN HIGHER EDUCATION ORGANIZATIONS (HEOS)

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Abstract

MTAL stands for Metaphorical Thinking and Action Learning. No doubt language is a vehicle for learning. Language and thought are two highly inseparable and interwoven parts in metaphorical usage, and language develops as concepts associated with one domain of meaning are extended metaphorically to another (cf. Morgan, 1993). The purpose of metaphorical expression and usage is that it is able to resonate the meaning underneath a superficial surface of a subject of interest through insightful theoretical abstraction, reification of the abstraction, comparison and analogical use of metaphor in actions and performance deliveries. Metaphorical implications pervade the theories of organizational development, and similarly they can be the food of thought for more critical reflective thinking and insightful, proactive questioning that leads to achieving a true higher-order and double-loop learning experience. Learning institutions like universities and teacher colleagues in particular must thus balance individual and collective learning experiences through walking a simultaneous path of programmed knowledge and insightful questioning. In this way, learning outcome is reflected and exemplified in the images of the learning institution held in its member's minds, and/or in the epistemological artifacts e.g. the maps, memories and programs (Robinson, 2001). This article reviews the essentiality and practicality of the theme – MTAL – in the context of achieving a sustainability in competitive advantage for an educational

institution, forming essentially a framework to guide lifelong learning, to forge affiliation and value-enhancement social network, to graduate competent students and professionals and to ensure synergistic, innovative industrial-institution collaborative works and action learning projects. Essentially, when both the action learning framework and metaphorical thinking are cross-fertilized in the context of action research, it demonstrates a useful closed loop individual and organizational learning model.

Introduction

Progressing into knowledge-based society, market value of organizations (i.e., share prices) will be more and more driven by their intellectual capacities and abilities to innovate and be creative. Such examples prevail in every country, and often are exemplified in TV advertisement and magazine publications. However the basis of intellectual capitalization is learning in action. Even worse still, learning how to learn is often neglected as parts of the training in HEOs (Higher Education Organizations) or in Schools. It is much more sustainable to teach one the skills to catch fish than just to feed him or her with fish caught. Teaching how to learn so that one can adapt confidently to changing environment and multitude of demands in the marketplace (i.e., employer's job requirement, changing product design and feature, human competencies requirement, socialization skill and technological know how) is like teaching one the techniques in catching fishes. Such metaphorical implication and comparison provide much insight and urgency in drawing us towards the attention in learning how to learn, and action learning in action research context is an excellent learning mechanism to enable us to strengthen our ability to adapt to change. In change, there is hope for winning, gaining leadership,

high performance and institutional reputation. Without change, we will only seat still and wait for the next wave of competitive gulf to swallow us with no pity. University – a societal environment for exploration, capitalization, interpretation and distribution of knowledge – is a starting point where we can acquire most of our ability in adapting to change in the society but historically, training emphasis in university has been very pedagogical being exemplified in the form of programmed knowledge. In this article we will review the essentiality of action learning particularly of its strength in critical reflective questioning as an alternative or rather complementary methodology forward in enhancing one's ability in learning how to learn (fast, effective, capable to adapt abrupt change and societal requirements). Ability for critical reflective and insightful questioning in action learning context is extremely crucial. For instance, Pallas (2001) posed an excellent question in his paper entitled as "Preparing Educational Doctorate Students for Epistemological Diversity" saying as such: Do we want to prepare novice researchers for the world of educational research as it is, or do we want to prepare them for the world as it might become? This draws the effort of Pallas (2001) to explore in depth into the urgency need for epistemological diversity through, for instance, by the participation, reification and constellation of the communities of practice (cf. Wenger, 1998).

An organizational learning model for HEOs is demonstrated in this article. It guides institutional TQM blueprints, facilitate continuous higher order learning across the entire organization and ensure service qualities are delivered on expectation or beyond stakeholders' requirements. It promotes collective commitment in knowledge acquisition,

knowledge internalization and distribution that help driving up organizational performance. For instance, in 3M Company, there is a policy called the "15 percent rule," where all 3M employees are expected to spend roughly 15 percent of their time dreaming up new products, or new ways of lowering costs or increasing productivity (cf. McElry, 2000). These are the themes in action learning: holistic empowerment and team accountability, culture of higher-order learning organization and vision, corporate intents driven.

Literature Review on Metaphorical Usage

Language and thought are two highly intertwined, inseparable parts in metaphorical usage. The purpose of metaphorical expression and usage is that it is able to resonate the meaning underneath a superficial surface of a subject of interest through insightful theoretical abstraction (Tsoukas 1993), reification of the abstraction (Walters-York, 1996), comparison and analogical use of metaphor (Lennon and Wollin, 2001), or through metaphorical thinking based on three widely known categorization of metaphorical instances: 1) substitution, 2) comparison, and 3) interaction (cf. Walters-York 1996). Metaphor also shapes understanding by succinctly "transforming shared characteristics from vehicle to topic without enumerating them specifically, thus providing a compact Gestalt or coherent whole for the topic (cf. Kaarst-Brown and Robey, 1999). In areas of competency development, Drejer (2001) propose a football team-based metaphor to symbolize and help articulating the process of learning (organization) by conducting an action case study in a medium-sized Danish company, and Field and Ford (1995) present the use of car speedometer and ship's propellers as

ways to promote double-loop learning. In Drejer (2001), action research is conducted, synthesized, analyzed and concluded in both the values of researcher and participants, which in this case is a rather interactive and active one – meaning participants become researchers into their own practice. Although a metaphor has explicit ability to implicate another or series of metaphorical expressions (Walters-York, 1996; Morgan 1997), Drejer (2001) instead resolve to focus on only two particular aspects of metaphorical implication – that is, the level of competence development and iterative process of learning cycle.

The use of metaphor necessitates a subject of interest which often is represented by a metaphorical expression articulated in primary (the non-metaphorical term) and secondary subject (the metaphorical term) (cf. Walters-York, 1996). In Walters-York (1996), it is asserted that the secondary subject presumably evokes a system of associated implications (a system of attributes and relations predicable of the secondary subject or the metaphorical term predicates the entire system of attributes and relations in a single lexia or an alternative dimension), which is then applied to the primary subject. In reality such mutually reinforced effect of a metaphorical expression has upside and downside: in creating ways of seeing they also tend to create ways of not seeing (Morgan 1997). For instance, product cost flow is metaphorically implicated to mean an understanding of an entity (product cost) particularly in how the entity is flowed, moved from one location to another. In another example, Grady et. al. (1996) demonstrated the use of metaphor (such as school as family, forum, exhibition, orchestra, crèche, garden, museum, mental strait-jacket, shopping mall, beehive, herd, hospital, military camp, ghetto, artist's palette,

machine, expedition, team, traffic jam, negotiating area, prison, Olympic games, living organism, theatre, and labor ward) in crafting a framework of strategic thought to help strategize, and to device policies to help improve school's overall performance. In other words, metaphorical usage helps us to concretize certain aspects of otherwise elusive properties of nature and phenomenon of interest (Walters-York, 1996). The use of metaphor in research has also a strong basis, for instance in Pepper (1942) who held that just four metaphors underpin four "adequate world hypotheses." These hypotheses and their root metaphors are (cf. Grady et. al., 1996):

1. Formism, which reflects similarity, norms and laws of nature (i.e., school as culture).

2. Mechanism, which is concerned with machine-like matters (i.e., school as machine and herd).

3. Contextualism, which is concerned with the historical event, the act, the incidents of life, novelty and change (i.e., school as exhibition, expedition and traffic jam); and

4. Organicism, which relates to organism and integration (i.e., school as family, garden, beehive and living organism).
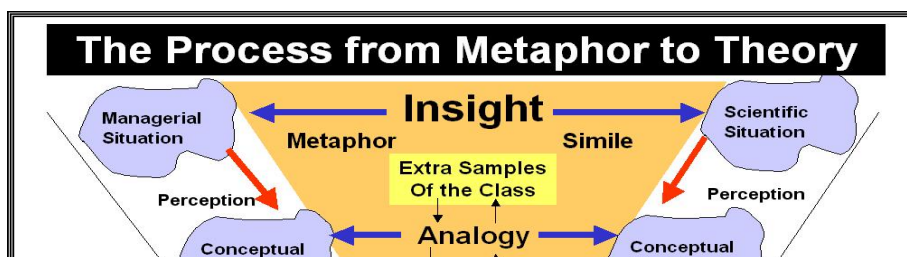
Figure 1. The Process from Metaphor to Theory

The other example of how metaphor is applied in theory construction is explicitly demonstrated by Beers (1996) and case-studied by Lennon and Wollin (2001) in four stages: 1) meta-level research design, 2) macro-level research design: analytical induction and structure mapping metaphors, and 3 meso and 4) micro level. Meta level of the research deals with how the research is positioned within an existing academic dialogue. Macro level is about how a number of studies are related so as to increase the knowledge contribution made for the research questions and findings. Two methods are recommended in Lennon and Wollin (2001): analytical induction and structure mapping of metaphor mapping the analogies contained in a metaphor in such a way that abstraction, testability of theory and generality are maximized (**Figure 1**). The meso level of research design is the application stage of research in which it studies how each study is designed. Finally micro stage illustrates the methodology of generating theory from metaphor across a series of studies (Lennon and Wollin, 2001).

In conclusion, the resonance and mutability of the implicative complexes evoked by metaphorical expression enhance the richness and multiplicity of possible meanings as derived from the metaphor (Walters-York, 1996). Metaphor, when in use with insight and experience, reveals new sources of insight, new modes of inquiry, new problems, new relations to address and even more strategically, new ways of thinking and asking questions (cf. Wells, 1998). Molecular mapping is a concatenation of two metaphors, namely molecule and mapping. When it is further implicated on the context of human competency development, it helps to expand the conceptualization capability and enhance robustness and chances of success in implementation. **Table 1** demonstrates some of the critical attributes and dimensionality of molecular mapping as a result of metaphorical implication in which practitioners and researchers in human competency development should explore into. Insight and foresight can thus be gained by metaphorical manipulation. Exact implication and their contribution to the understanding of human competency development in terms of conceptualization, theoretical frameworking, hypothesizing, research design, thinking process and actual implementation are self-explanatory. For further technical details as to how sub-metaphors are generated in each main metaphor (molecule, mapping, molecular mapping) – although not exhaustive one – one can cross-reference to Chan and Tan (1992) and Tan (2002a; 2002b). As such, it provides a platform for which further research can be positioned within an existing academic dialogue and also creates an innovative thinking-mechanism conduit for which rigorous research can be conducted that are able to provide better validity and reliability. This is similar to the stage of meta-level of research design as demonstrated in Lennon and Wollin (2001).

Table 1: Metaphorical Implication of Molecular Mapping – A Demonstration

Molecular Mapping	
Main Metaphor	**Sub-Metaphorical Resonance**
Molecule	• Chemical reaction: interactivity, equilibrium, non-equilibrium, open system, closed system, isolated system, ideal or non-ideal. • Molecular manoeuvrability (agility) • Activation energy (critical mass principle) • Chemical reactivity: alignment, synchrony, cultural assimilation and effect • Randomization • Bonding: level and extent, type of bonding • Structure and implication • External effect: energy excitation, thermodynamic and heat-mass transfer effect • Minimization or maximization (technicality)
Mapping	• Road Map: total picture, minimal distance or minimal-effort route. • Process: action path • Historical understanding and basis • Systematization
Molecular Mapping	• Agility: Properties alteration, innovation, R&D

Quality-Induced Action Learning in Action Research Context

Action learning, as defined in Howell (1994), is "both a concept and a form of action which aims to enhance the capacities of people in everyday situations to investigate, understand and, if they wish, to change those situations in an ongoing fashion, with a minimum of external help. Action learning is concerned with empowering people in the sense that they become critically conscious of their values, assumptions, actions, interdependences, rights, and prerogatives so that they can act in a substantially rational way as active partners in producing their reality." Changing personal and collective values are essential to the success in an organization. In Collins and Porras (1996), these personal and collective values are exemplified in core ideology, core values and purpose of an organization. Core ideology defines the enduring character of an organization and thus provides a source of guidance and inspiration particularly useful when encountering

turbulent environment. These core values and ideologies require no external justification. Instead they all possess the intrinsic self-motivational values that can sustain the purpose of a life-long learning collectively in an organization (cf. Collins and Porras, 1996). These values also require the team working spirit and their synergistic actions in order to work effectively. Metaphorically we can transcend the thinking on team working as a fleet of ship where the whole fleet is always greater than the sum of its parts, and most importantly it also requires the optimal contribution of each part (cf. Geus, 1997). In technical interpretation a fleet of ship requires an intelligently integrated optimal control system that adapts to the change of environment and the command of the captain – the leader. Constant feedback of crucial variables (i.e., temperature and steam pressure) is necessitated for purpose of instantaneous judgment and decision-making. In humanistic sense the overall working environment must be conducive enough to ensure working spirits are uplifting and healthy, that all are able to sail against all odds and challenge the unpredictability. The foregoing narration is a result of thinking metaphorically. Leadership plays a vital role in the fleet of ship and action learning. In Goleman et.al. (2001), it is already asserted that leader's moods affect the emotions of the people around them through an open-loop interpersonal limbic regulation effect in which a person's transmitted signs can alter hormone levels, cardiovascular functions, sleep rhythms, and even immune functions, inside the body of another. In sum, a good leader motivate people in a variety of ways (cf. Kotter, 2001): 1) articulate the organization's vision in a manner that stresses the values of the audience they are addressing, 2) gives people a sense of control, 3) help people grow professionally and enhance their self-esteem.

The requirement of measurement is a key part within the fleet of a ship. The act of measurement affects the behavior of individual and the collective teams, consciously or unconsciously (cf. Thompson, 1998; Tan 2002b). Measurement is also a key driver for personal and organizational change, and change is a necessary outcome of action learning. As stated clearly in Revans (1983), action in action learning is not only an end, but also a means to an end – personal development or in our case organizational development (i.e., higher education institution [HEIs]). In other words, action learning enhances the capability and capacity of the learner and action practitioner to pose insightful critical, reflective questions in conditions of ignorance, risk and confusion: first to design a new course of action; second to implement the course of action (Revans, 1984). In other words, action learning differs from normal training that its primary objective is to learn how to ask appropriate questions in conditions of risk, rather than to find the answers to questions that have already been precisely defined by others (Keys, 1994; Koo, 1999). To accomplish this task, action learning requires one to go beyond first-order learning (i.e., programmed knowledge) to second-order or double-loop learning (i.e., insightful critical questioning) (cf. Field and Ford, 1995). In Field and Ford (1995), learning through critical questioning is a process of scrutinizing goals in relation to information from the enterprise's operating environment and from people's personal and social environments. Critical questioning is a crucial part in change management as without it, change is incremental and the thinking paradigm surrounding the change management and projects is only a reflection or copy of an existing version. Only if we transcend our thinking paradigm that we are able to think outside the box and to succeed in our expectation – perhaps in discontinuous performance level. Such is also the basis of

critical or innovative thinking paradigm often undertaken by critical theorists or researchers advocating postmodernism and phenomenologicalism. Thinking strategically and in higher-order terms is also reinforced by Wells (1998) as strategies in unleashing limitless power of our thoughts.In mathematical sense, action learning is about a higher-order learning as exemplified in composite learning experience through programmed knowledge (P) and insightful critical questioning (Q): $L = P^{Higher\ Order} + Q^{Higher\ Order}$.

Programme knowledge can be acquired by undergoing a pedagogical course of training and learning in class-room format, but much of the insightful critical questioning capability can only be learned through self-motivation and constructive learning approach. Thus, much of the essence of action learning is embedded in the steps of action research where its major characteristics are presented by Coughlan and Coghlan (2002)

In McKay and Marshall (2001), action research involves necessarily two highly interlinked cyclical processes – one deals with the interest in problems solving, and another the action research process which is aimed at gaining knowledge and capacity to comprehend different worldview and thinking paradigm and improve organizational situations (**Figure 2**). In other words, both the problem-solving and knowledge generation process are highly interlinked and inseparable.
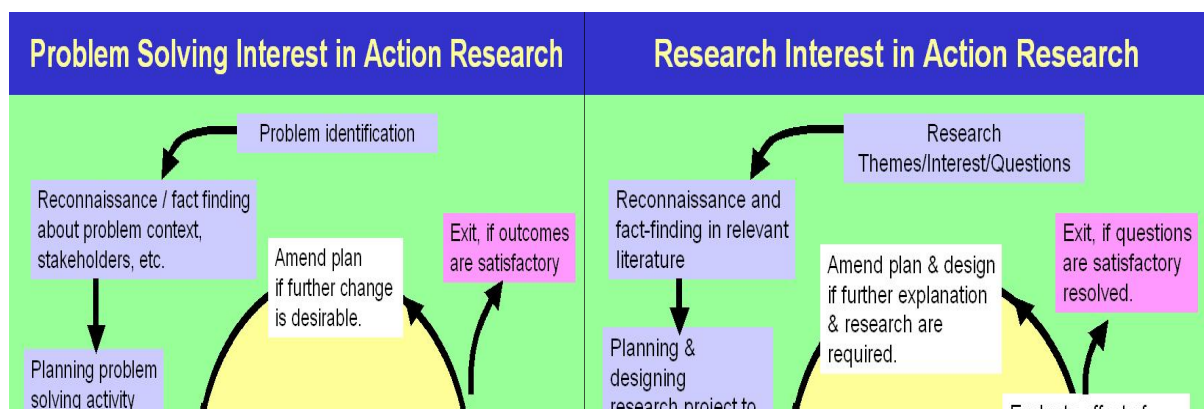
Figure 2. Practical Problem Solving and Research Interest in Action Research

The L=P+Q formulation will enact as an effective framework to initiate an action learning programme, and TQM (i.e., in service and educational industries) will provide a context of thrust and infrastructure in guiding the overall path of action learning. As service is entailed with simultaneous consumption and production, action learning driven by the expectation of a service quality should not deviate away from consumer participation. Consumers are thus inseparable from any action learning programme in service-oriented organizations such as higher learning institutions. The intention of bringing action learning in the context of action research is, as it is reinforced in Gregory (1994), to turn the action participant into an agent for change in the organization, and this requires action research approach which is not only oriented towards action, but one which is deliberate, rigorous and public.

Buttle (1996) presents a very comprehensive critique and review on a version of service quality advocated by Parasuraman et. al. (cf. 1988). Such service quality identification methodology is also employed by Hill (1995) in higher education industries, where

service quality is judged by the differences between consumer's expectation and consumer's actual experience: $\Delta = (E_1)$ expectation $- E_2$ (actual experience), where if Δ is less than 0, it signifies more than satisfaction; alternatively, if Δ is equaled to zero it means mere satisfaction, and if Δ is greater than zero, consumer's satisfaction requirement is not met. As actual expectation of students are difficult to be judged particularly for new intake students where still the process of cultural and experience assimilation are at infantry stage, perhaps a more proactive action-learning approach is needed to narrow the deviation between the expectation of learning designers (providers) and consumers (**Figure 3**). Otherwise the educational business is in a blinded state randomly worked on to hope to hit some student target. In this way there is a more confirmed frame of reference to engage in the measurement or identification of educational service quality – an exemplified approach in management by objective (**MBO**). Services, as outlined in Hill (1995), are ephemeral to the extent that they can be consumed only as long as the activity or process continues. As such, quality-induced action learning in the context of action research is about absorbing consciously into a process of simultaneous learning and action taken to satisfy beyond or meet the consumer's expectation in service performance. In other words, the key matter in action learning is learning how to learn effectively and productively, and making sure also that the actions are delivered and reverberated back to reinforce the learning behavior and outcomes.
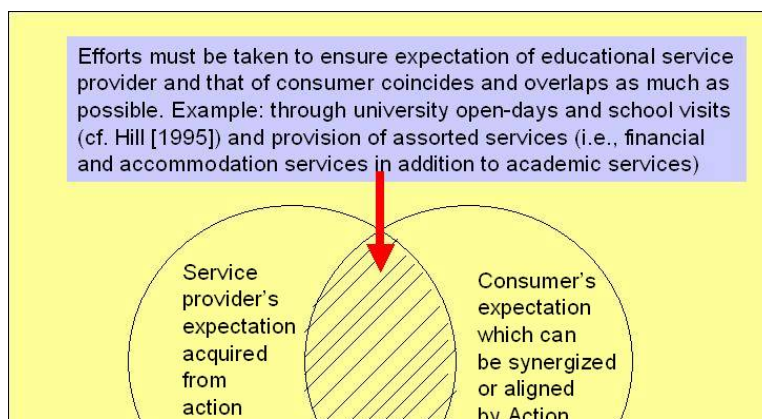
Figure 3. Broadening the Gap between Educational Service Provider and its Consumers

By explicitly embedding both action learning framework of L = P + Q and metaphorical thinking in action research context will demonstrate a closed thinking-action model for use in action learning (**Figure 4**). This action-learning model can be used in higher education institutions as a main stream of methodological strategy in course learning facilitation and students' learning process. For instance, a new Master of Arts (MA) Degree in Human Resource Strategy (HRS) jointly offered by Sufforlk College of Higher Education and the University of East Anglia in UK demonstrate the capability of such an action-learning approach (cf. Gregory, 1994). In **Figure 4**, metaphorical thinking and intended programmed knowledge help to sustain the cyclical process of problems solving and research objectivity in action research context, while the critical reflective questioning at each exit and starting point of the action research cycle help to close the gap of original questioning paradigm with the exit questioning paradigm. This is a necessary step in any action learning programme as each learning cycle will provide insights and create foresights in each problem situation and thus will enable action practitioners and learners to think outside the box and transcend original paradigm (Q_o) into a more innovative or effective paradigm (Q_e). The process stops when insight

questioning and critical worldview searching and pragmatic action deliverables are exhausted, signifying that the problems on hand or the learning requirements are reasonably satisfied and fulfilled. In other words, the cyclical learning action and research framework will yield insights concerning the perceived problems which will lead to practical help in its situation and that experiences of using the framework will enable it to be gradually improved (Checkland and Scholes, 1992).
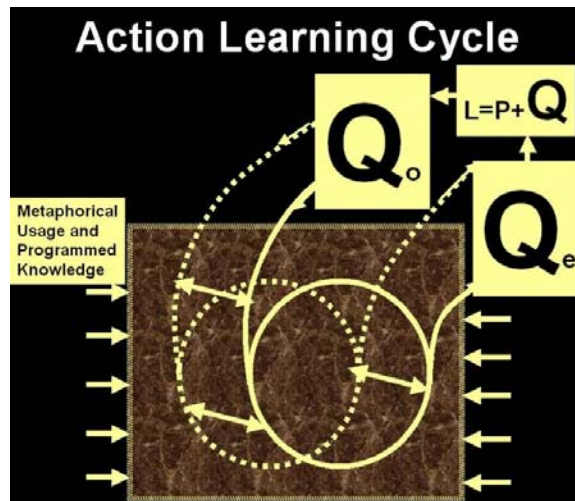
Figure 4. MTAL in Enabling Cyclical Activities in Action Research

Figure 4 can also be translated into a control block diagram for ease in understanding (**Figure 10**). It demonstrates the key guiding strategic principle in action learning activities – TQM (Total Quality Management) – in which original problem situation is translated into a problem set rooted in TQM-induced worldview or paradigm. The uses of TQM in higher educations are prevailing since 1980s and have proven its usefulness (cf. Ho and Wearn 1995; Zairi 1995; Kwan 1996; Cheng and Tam, 1997; Roffe 1998). Our TQM context resembles that asserted by Ho and Wearn (1995), where they define TQM in symbolized form as follows:

T = Total = Every person in the firm is involved (including customers and suppliers): This fits into our foregoing discussion of action learning that is necessarily to involve consumers in a service-driven organization as in service, consumption and production occur simultaneously.

Q = Quality = Customer requirements are met exactly: In our case we are dealing with strategic attention to $\Delta = E_1 - E_2$ in action learning context.

M = Management = Senior executives are fully committed: Leadership as captain in a fleet of ship.

There are three interpretations to our action-learning model for higher education organizations (HEOs) as demonstrated in **Figure 5**:

1. It is a model for action learning that clearly outlining key action learning steps, where learning is centered around the need to find a solution to a real problem. In this sense, action learning is a highly visible, social process, which may lead to organizational change.

2. It is an action-learning driven TQM model that is holistic and spanning across divisions, ranks and roles in an organization. The price of quality is therefore our critical reflective questioning of our learning and action outcomes in TQM context in broadening the overlaps between quality provider's expectations and consumer's expectation. In doing so quality service is delivered with proactive expectation, controllability and creativity. Double-loop and higher-order learning are embedded in this process of continuous and radical change of the TQM projects and their implementation.

3. It is a model in realizing a learning organization (i.e., a learning university). "Learning organization" is also itself induces deep metaphorical implication that binds our understandings about what we are, collectively, might aim to achieve and also provides us with images and ideas about processes and behaviors, attitudes and aspirations which (we believe) should color our approaches to our own learning, and affect all of those with whom we mix (Franklin et.al., 1998).
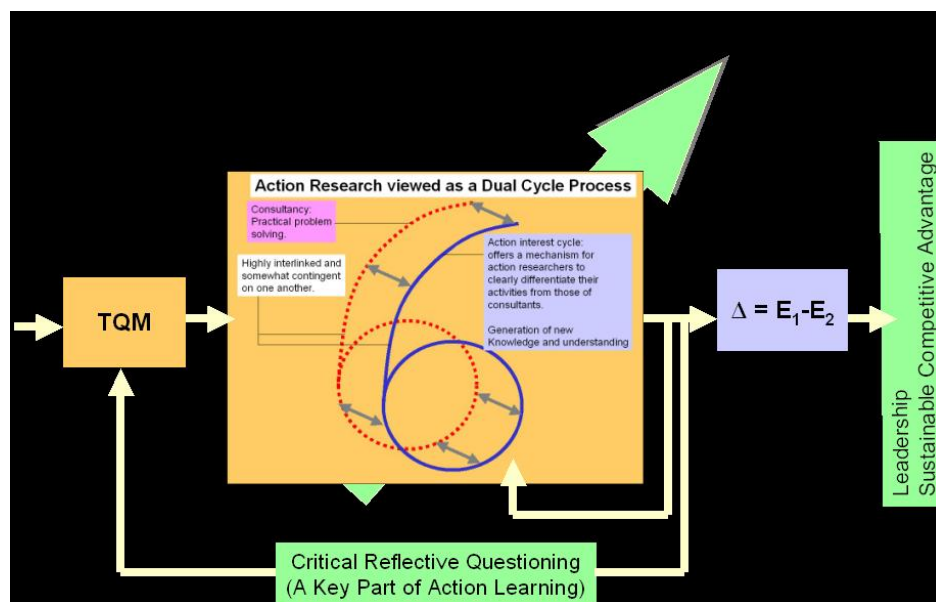
Figure 5. TQM-induced Action Learning Process Model

Conclusion

Research frontier in knowledge management has shifted away from focus in dissemination and categorization of knowledge to more action-oriented sustainable activities. In this sense action-learning strategies within the macro guidelines of action

research could be an excellent tool in knowledge management and operations of higher education organizations (i.e., universities and teacher colleges). This report demonstrates indeed that action-learning strategy – when supported by metaphorical insight and epistemological diversification competencies – can help creating a model of choice for knowledge management, TQM implementation (i.e., problems solving, continuous improvement projects, reengineering and radical change management) and corporate strategies leading towards a culture of higher-order learning organization (i.e., higher education organization). Action-learning led strategies will result in not just an ordinary learning organization – rather, action-learning strategies mould a higher-order version.

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THE DEVELOPMENT OF ONLINE LEARNING MANAGEMENT SYSTEM MODEL FOR RAJABHAT INSTITUTE

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Abstract

The purpose of this study is to develop a Learning Management System Model for Petchburiwittayalongkorn Rajabhat Institutes . The proposed model is claimed to be part of the Rajabhat asynchronous online learning. We used the Unified Modeling Language (UML) as a tool for system analysis and design. Two case studies have been implemented using the proposed model: the Rajabhat Petchburiwittayalongkorn Institute and the Sripatum University. We found that our prototype can support instructors and improve student learning capability. Moreover, the online learning evaluation based on the proposed model is at a high level.

1.0 Introduction

This paper is divided in to the following parts: 1) Review of e-Learning and learning management systems 2) System analysis and design of the proposed LMS model 3) The prototype system and 4) The conclusions

2.0 Review of e-Learning and Learning Management Systems

2.1 e-Learning

e-Learning refers to the use of Internet technologies to deliver a broad array of solutions that enhance knowledge and performance [1]. e-Learning goes beyond Computer Based Training (CBT) as it includes the capability of Web-based training (WBT) or Internet-based training (IBT), which make it capable of instantly updating, storing, retrieving,

distributing and sharing instructions and/or information. And it is delivered to the end user via computer using standard Internet technology.

2.2 Learning Management Systems

The learning management systems can be divided into user management, instruction management, and administration management. Details of these different areas are as follows:

2.2.1 User Management

User management consists of functions that support learners and students as in the following diagram:
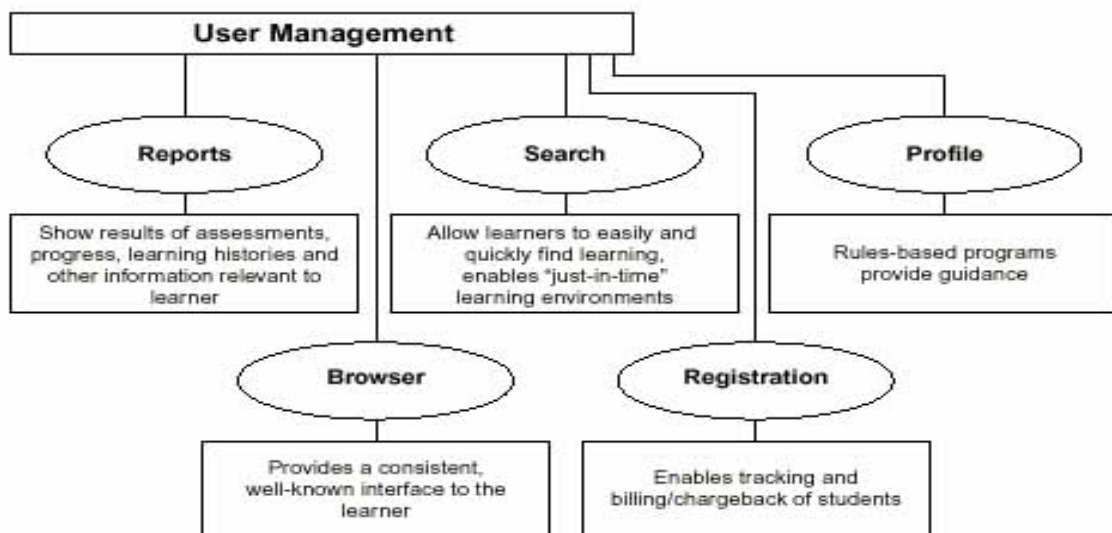
Figure 1: User Management

Browser

The browser provides a consistent well-known GUI interface to the learners.

Registration

One of the most important components of the system, registration, enables a number of other functions of e-Learning such as payment for courses, tracking of pre-identified learners, and generating reports.

Reports

While there are a number of possible report types generated by e-Learning, among the most important are reports geared for the learner. These reports show results of assessments, progress through curricula or against targeted results, learning histories and other information from the database relevant to the learner.

Search

Allows learners to easily and quickly find learning resources, enables "just–in–time" learning environments.

Profile

Profiles are rules-based programs that provide guidance based on the way a series of questions are answered. Not surprisingly, they provide the virtual counterpart to counseling.

Instruction management consists of functions that support instructors as in the following diagram:
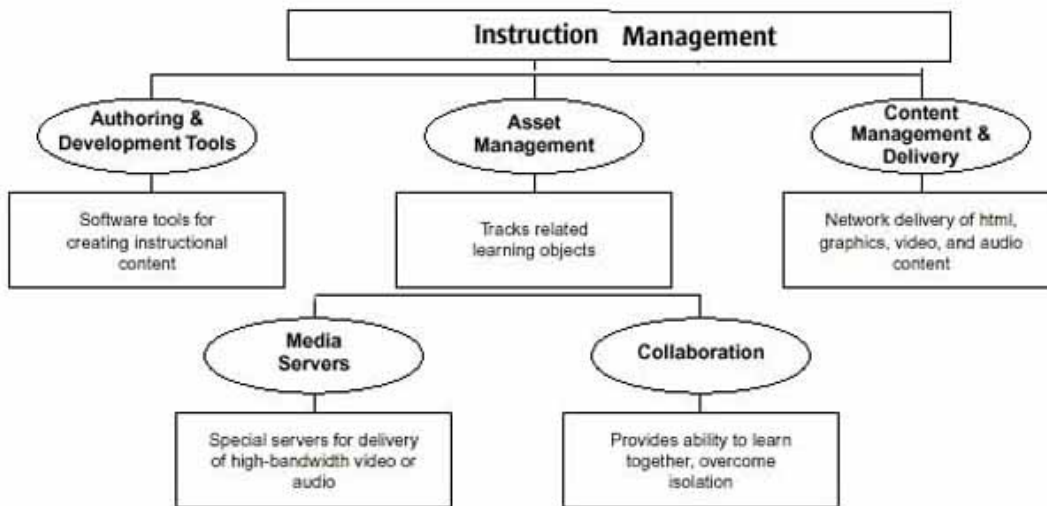
Figure 2: Instruction Management

Authoring and Development Tools

Instructors and course developers need easy-to-use software tools for creating instructional content. These tools should be non-proprietary, meaning that content created in one e-Learning environment can be served and tracked in another e-Learning system.

Asset Management

Asset management is an important function in content creation to assemble learning objects from different sources and to track which graphics, video, audio, test questions, and other asset types are related to each other in a course module or curricula.

Content Management and Delivery

Content delivery is one of the best understood areas of distance learning because it is the area most people associate with web-based learning. While the distinction between web, video, audio, and database servers is blurring as computing power increases and bandwidth becomes more available, vendors seem to be aligning themselves in just one or two segments.

Media Servers

Some servers are bundled with software specifically configured for delivery of high bandwidth, rich media types such as video or audio.

Collaboration

One of the most pronounced weaknesses of the Internet in terms of its facility for providing an effective learning environment, is its potential for isolating the learner from others. Collaboration software, whether it be audio, video, or textual chat rooms,on-line classrooms, or something as simple as an e-mail alias, provides the ability to overcome isolation and link learners and instructors with each other.

2.2.3 Administration Management

Administration management consists of functions that support e-Learning management as in the following diagram:
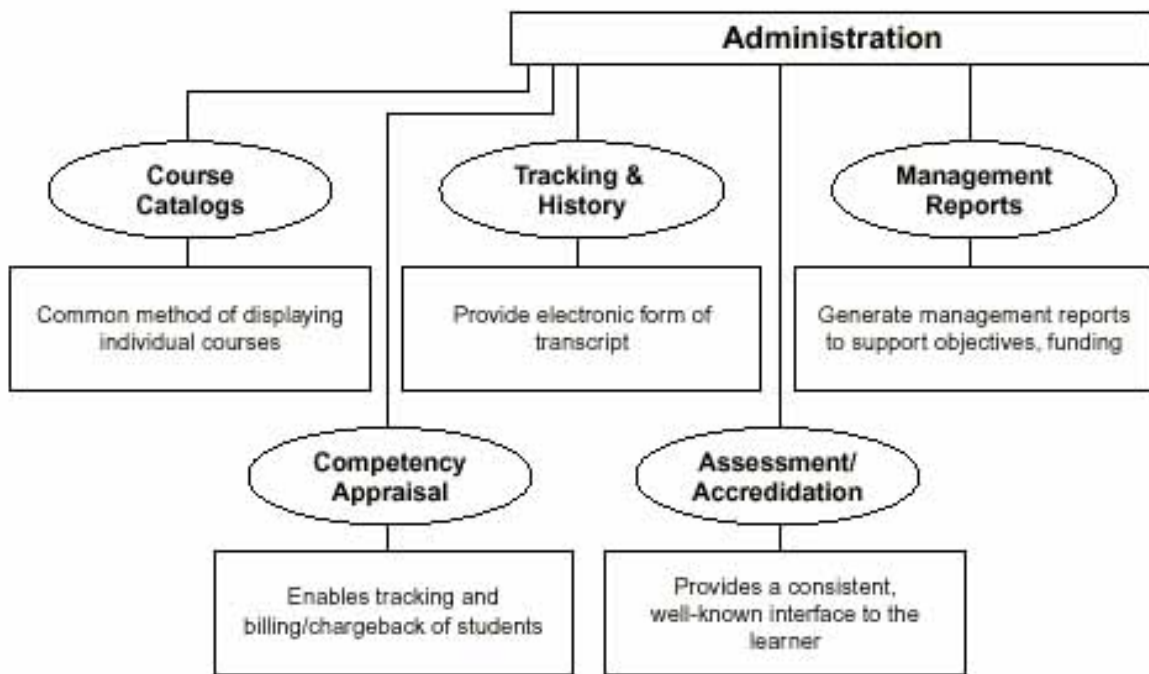
Figure 3: Administration Management

Assessment Accreditation

Without the ability to assess the degree of mastery of a skill or knowledge, most web based training is little more than presentation of information. There are several different types of assessment from surveys, self-assessments, and 360 assessments, all the way to formal testing with authenticated testes and reporting.

Competency Appraisal

Possibly the most critical and leverage able components of e-Learning is the competency appraisal functionality. Using this methodology, the learner is queried or self assesses themselves on their skills, competencies, knowledge, and behavior, and a customized curriculum is returned to the learner via the browser-based e-Learning system which provides specific, prioritized, and sometimes personalized learning to close the learners measured gaps.

Course Catalogs

Course catalogs are a common method of displaying individual courses by subject, department, school, media, learning level, etc. Course catalogs, like in the physical world, should contain descriptions, prices, dates, and instructors. Curriculum maps are intuitive groupings of individual courses. As the amount of content in a distance learning system increases, it becomes more and more important to organize it logically for the learner. Curriculum maps can provide this capability.

Tracking and History

Another crucial capability of an e-Learning system is the ability to track a learner through the system and to provide an electronic form of a transcript, a history of all the courses taken along with assessment results, if applicable, and courses for which individual learners have enrolled. Users should also be able to add other training or education taken outside the system to provide a "one-stop" transcript.

Management Reports

Experience has shown this to be another critical component of a complete e-Learning system. Factors which will generate additional funding and support will be found in these reports, especially when they are tied to ERP-like functionality where training can be determined.

3. System Analysis and Design of The

Proposed LMS Model

Thailand is going to a new education paradigm which focuses on learners (student centered), and distant online learning [3]. The Internet is the technology of choice as learners can learn by themselves with no time limitations, no limitations on available places, and resources are easy to prepare.

The research seeks to develop a general learning management system model for higher education institutes. The prototype will be used to support teaching and learning in the Rajabhat Petchburiwittayalongkorn Institute and the Sripatum University. The

prototype will provide instructor's services such as teaching materials creation, administration management services, and services for students such as web search, web discussion and bulletin boards.

3.1 Overview of The Proposed RLMS Model for Higher Education Institutes

The Unified Modeling Language (UML), a standard modeling language, has been used to model the system. The proposed RLMS Model consisted of 4 sub systems: 1) Registration system 2) Create content system 3) Study system 4) Service system. These sub systems support 4 groups of users: Students, Teachers, Members, and Visitors.
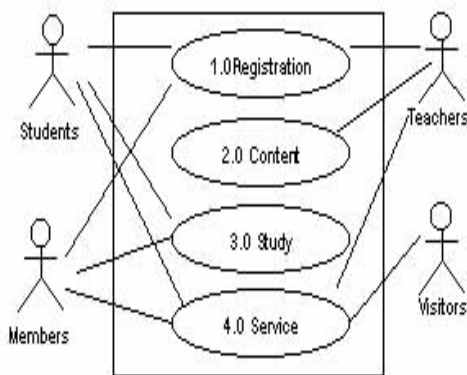
Figure 4: Overview of RLMS Model

3.2 Model of Registration

One of the most important components of the system, This sub system consists of 3 use cases: Login, Profile, and Logout.
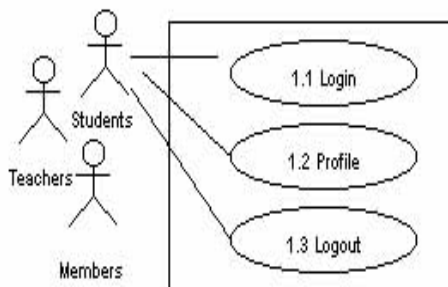
Figure 5: Model of Registration

3.3 Model of Create Content

This sub system provides services for teachers to plan and create their lessons. It consists of 6 use cases: Login, Create Content, Upload Resources, Create Exercises, Evaluation, and Logout.
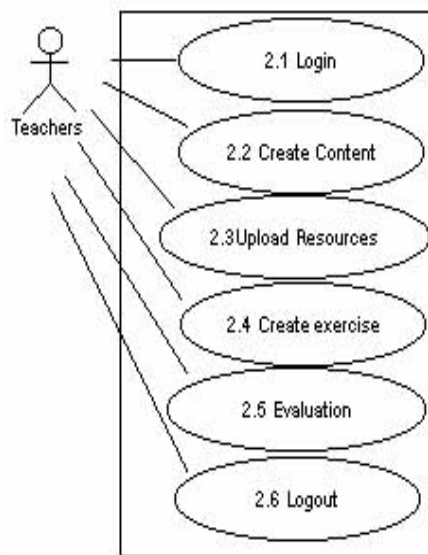
Figure 6: Model of Create Content

3.4 Model of Study

This sub system provides services for teachers and students to access learning materials, down load the contents, practice with exercises, and to evaluate. Students can study at anytime and anywhere. It consists of 6 use cases: Login, Study, Download Resources, Exercise, Evaluation, and Logout.
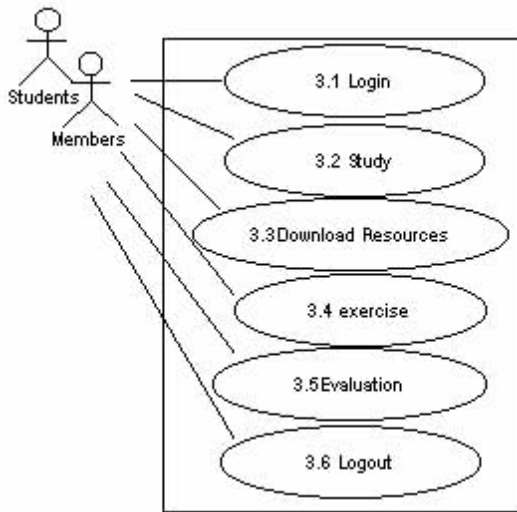
Figure 7: Model of Study

3.5 Model of Service

This sub system provides administrative services. It consists of 4 use cases: Web Introduction, Web Search, Web Discussion, and a Bulletin Board.
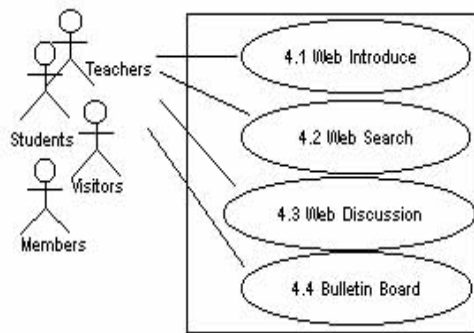
Figure 8: Model of Service

4. The Prototype System

We are implementing the model. Several use cases have been implemented and tested. Two case studies have also been implemented: the Rajabhat Petchburi-wittayalongkorn Institute (RLMS) . Some screen shots are captured here, they are as follows:
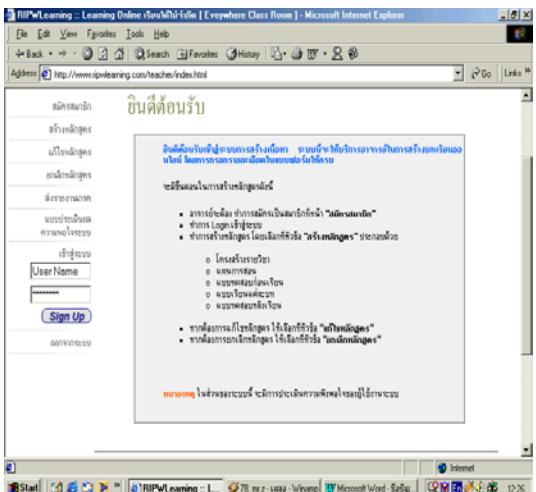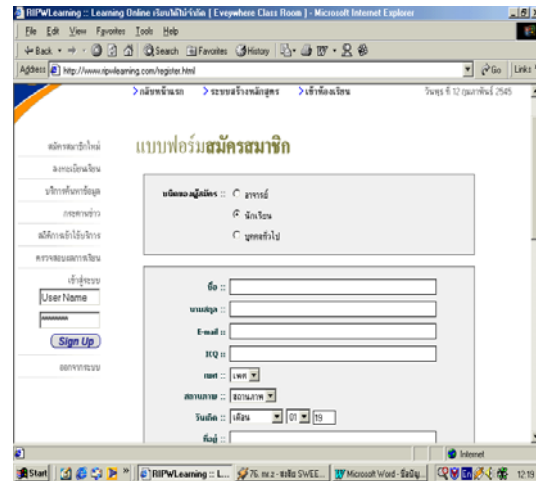
Figure 10: Registration Page

Figure 11: Creating Content Page
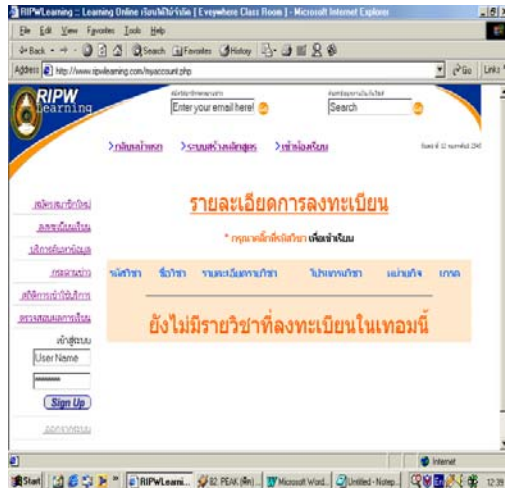
Figure 12: Studying Page

5. Conclusions

The prototype system is implemented at web sites http://www.ripwlearning.com . We found that our prototype can support instructors and improve student learning capability. Moreover, the online learning evaluation based on our model is at a high level. We also expect that the model is scalable enough to be applied to other institutes with different sizes and capabilities.

6. Acknowledgment

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TECHNOLOGY-ASSISTED PROJECT-BASED LEARNING: LESSONS LEARNED FROM AN AMERICAN EXPERIENCE.

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Kedah Darul Aman.

Abstract

Project-based learning is a student-centered comprehensive instructional approach in the classroom where students collectively engage themselves in complex learning tasks. Students usually work on a project over an extended period of time and the emphasis is on doing action-oriented meaningful tasks rather than learning about something. Many authors have indicated that the use of computer technology can further enhance the effectiveness of project-based learning. Recent advances in educational technologies have made student-centered learning in a technology rich environment both possible and feasible. This paper will report part of a larger study carried out at a school in the United States on the use of constructivism and technology in project-based learning. Data collection techniques included those typically associated with qualitative field research. Technology environment of a school and how technology is used in one of the project-based classes will be presented. Some lessons learned from this American experience will also be provided.

Introduction

Project-based learning is a student-centered comprehensive instructional approach in the classroom where students collectively engage themselves in complex learning tasks. Students usually work on a project over an extended period of time and the emphasis is on doing some action oriented meaningful tasks rather than learning about something. Use of computer technology has the potential to enhance the effectiveness of project-based learning. In this paper, the technological infrastructure of an elementary school in the United States of America how technology is used in one of the project-based learning classes will be provided. This paper will be concluded by providing some suggestions of how technology can be used in our schools.

Research Questions

In this paper, the following questions will be addressed.

1. How is the technological environment of the school?
2. How is project-based learning activities implemented in the classroom?
3. How is technology used in a project-based learning class?

Methodology

This study is exploratory and descriptive in nature, and was conducted at a single elementary school in the state of Oregon, United States of America. The school employs project-based learning activities as an important focus of the school curriculum. To

preserve confidentiality of the findings of this research, a pseudonym is given to the school. Hereafter, the school will referred to as the Green Hill Elementary School. Based on the research questions and the phenomena being studied, a qualitative case study methodology was used. Data collection techniques included those typically associated with qualitative field research such as interviews with teachers, classroom observations, and an examination of various educational documents and artifacts. The data for this study was collected over a period of five months. Although four teachers from the school participated in the larger study, for the purpose of this paper only interviews with one of the teachers will be considered.

Review of Literature

The literature review for the research covers journal articles, books, reports, dissertations, online resources, ERIC documents, and other publications. For the purpose of this paper, the literature review will be limited to the following sub-topic.

a) Characteristics and benefits of the project-based learning

b) Development of project-based learning

c) Technology use in project-based learning activities.

Characteristics and benefits of project-based learning.

There are a number of characteristics and benefits of project-based learning. Based on Moursund (1999), the following are some of the important characteristics of project-based learning:

1. It is learner-centered and intrinsically motivating.

2. It encourages collaboration and cooperative learning.

3. It requires students to produce a product, presentation, or performance.

4. It allows students to make incremental and continual improvement in their product, presentation, or performance.

5. It is designed so that students are actively engaged in "doing" things rather than in "learning about" something.

6. It is challenging, focusing on higher-order skills.

The Buck Institute for Education (1999) cited four reasons why educators would benefit using project-based learning. The first reason is that it allows teachers and students to focus on compelling ideas. Project-based learning allows contents to be investigated realistically and holistically. The second reason is that project-based learning is an effective and engaging strategy where students search for answers and solve problems. The investigations provide opportunities for students to learn complex ideas and skills and later apply them in a variety of contexts. The third reason is that project-based learning prompts students to collaborate while at the same time supporting self-directed learning. It offers the students the learning experiences that draw on the thinking and shared efforts of many individuals in the group. It also allows students to develop a variety of group social skills and negotiation. Finally project-based learning enable students to develop productive work skills that they can integrate in their life long learning endeavor.

In project-based learning, the role of teachers and students, the nature of curriculum, the teaching and learning strategies, and assessment are different from the traditional method of didactic instruction. In project-based learning the teacher acts as a facilitator and mentor, providing resources and advice to students as they pursue their investigation (Moursund, 1999). The students are actively engaged in conducting complex multi-faceted and authentic investigation often in small groups, extending over a period of time (Buck Institute for Education, 1999). The curriculum planned is student-centered, and the outcomes of the student's learning process are neither predetermined nor fully predictable (Autodesk Foundation, Inc. 1998).

In summary, project-based learning is a student-centered learning approach that engages students both cognitively and socially in their pursuit of knowledge construction. It encourages students to be involved cooperatively in challenging learning situations that focuses on higher order thinking and problem solving skills. In project-based learning, the roles of teachers and students, the curriculum, the instructional strategies, and assessment are different from the traditional teacher-centered didactic instruction. Assessment is an important aspect of project-based learning as it verifies, confirms, and demonstrates the promises of multiple learning outcomes.

Development of Project-Based Learning

Although the origin of project-based learning can be traced back to the second decade of the twentieth century (Kilpatrick, 1918) and very much supported by Dewey's philosophy of education (Dewey, 1899), its use have continued to gain support during the last three decades. In the 1970s and increasingly in the 1980s and 1990s, there has been

an increase in the literature on project-based learning. In the 1970s and 1980s several educators described the theoretical background and the rationales for implementing the project approach in the classrooms (Forman & Hill, 1980; Forman & Kuschner, 1977; Kamii & DeVries, 1978,1980; Katz & Chard, 1989). In the 1990s the literature on project-based learning continued its rapid growth. This is evident from a literature search conducted using the ERIC database. The result obtained using subject keyword and title keyword search on "project-based learning" is summarized in table 1.

Table 1

Result of Literature Search for Project-based Learning Using ERIC database

Years	No. of Subject Keyword Records	No. of Title Keyword Records
1970 –1979	3	1
1980 – 1989	9	3
1990 – 2000	119	15

Similarly, a search for documents written on "project-based learning" using the World Catalog Database revealed the following results.

Table 2:

Results of Literature Search for Documents on Project-based Learning using the World Catalog Database

Years	No. of Subject Keyword Records	No. of Title Keyword Records
1970 – 1979	0	0
1980 – 1989	0	0
1990 – 2000	27	17

Beside the increase of printed documents such as books, reports, and articles, there is in fact an explosion of information about project-based learning in the electronic medium of World Wide Web. A search for the keyword "project-based learning" using the meta search engine Alta Vista in February 2000, returned with a hit of 800, 211 web pages. Using the search engines Northernlight, Google, and Yahoo resulted in 22,274, 14,199, and 7,288 web pages respectively. Many of these web sites provide useful information about various aspects of implementing project-based learning. The publishers of these sites include governmental, educational, social (non-profit), and commercial organizations. There are also many sites published by teachers and students about their experiences and products of project-based learning activities. The information about project-based learning included descriptions, characteristics, benefits, research findings, teachers' and students' testimonies, students' projects, assessments, and many related topics that are useful for teachers. Although there is not much dissemination of research findings on the effectiveness of project-based learning on the web, there is much to be learned from others' experiences. Barbara Means argues that the typical research journal or research findings may not be the most effective mechanisms of learning for teachers. She asserts that web site presentations or visits to schools are more comfortable ways that can affect teachers' practices (Lockwood, 1998).

Thus, it is evident from the literature search that project-based learning as an instructional approach has been receiving much attention in recent years, especially in the last decade. This is probably in part due to the richness of its philosophy, characteristics, and other instructional appeals to educators.

Technology use in project-based learning activities

Sheingold and Hadley (1990) argue that learning among students can be successfully transformed if active learning, adventurous teaching, and well-integrated uses of

computer technology, are put together. A report to the President of the United States on the use of computer technology to strengthen K-12 education stated that:

> The widespread availability of modern computing and networking hardware will be necessary for technology to realize its promise, but will not be sufficient. Although the purchase of computers and the provision of Internet connectivity are perhaps the most visible and most easily understood manifestations of progress, a less obvious (and in some ways, more formidable) challenge will be the development and utilization of demonstrably useful educational software and information resources, and the adaptation of curricula to make effective use of technology. Particular attention should be given to exploring the potential role of technology in achieving the roles of current educational reform efforts through the use of new pedagogic methods based on a more active, student-centered approach to learning that emphasizes the development of higher-order reasoning and problem-solving skills. (PCAST, 1997, p.128)

One of the ways to face this formidable challenge is through integration of computer technology in project-based learning. Project-based learning has been used in many schools and by many different teachers because of its high level of authenticity (Moursund, 1999), and has the potential of achieving multiple learning outcomes (Autodesk Foundation, 1998; Buck Institute for Education, 1999; Katz, 1994; Katz & Chard, 1989; Moursund, 1999).

Many authors have indicated that the use of computer technology can further enhance the effectiveness of project-based learning (Blumenfeld et. al., 1991; Delo, 1997; Harris, 1998; Laffey et al., 1988; Means & Olson, 1995; Moursund, 1999; Moursund, Bielefeldt & Underwood, 1997; Polman, 1997). Recent advances in educational technologies have made student-centered learning in technology rich environment both possible and feasible. According to Hannafin and Land (1997), "Many technology-enhanced student-centered learning environments have been developed, ranging from situated, problem-based approaches (e.g., Jasper Woodbury Series, Voyage of the Mimi), to microworlds (e.g., Logo, Project Builder), to specialized manipulation tools (e.g., Geometer's Sketch pad)(p. 168)." This technology-enhanced learning environments are suitable for the implementation of technology assisted project-based learning. Hannafin and Land (1997) describe student learning in this kind of technology rich environment as follows:

> Technology-enhanced student-centered learning environments organize interrelated learning themes into meaningful contexts, often in the form of a problem to be solved or an orienting goal, that bind functionally their features and activities. They provide interactive complimentary activities that enable individuals to address unique learning interests and needs, study multiple level of complexity, and deepen understanding. They establish conditions that enrich thinking and learning, and use of technology to enable flexible methods through which the process can be supported. (p. 168)

There are many sources of information from books, periodicals, journals, magazines, web sites, and conferences that promote technology-assisted project-based learning activities in the classrooms. For example, in the entire Learning and Leading With Technology issue of April 1999, a number of suggestions and examples are provided on how various technologies can be used in project-based learning activities for the classrooms. And in the recently held 9th National Project- Based Learning Conference in San Francisco, many educators, teachers, and students around the country talked about many of their positive experiences in technology enhanced project-based learning activities

Findings

1. The technology environment at Green Hill Elementary

Green Hill Elementary School is well equipped with technology facilities. This school does not have a computer lab. Instead, computers are placed in all the classrooms. The number of computers in each classroom ranges from three to seven. Altogether there are about 25 computers for the 140 students in this school. The ratio of computer to students in this school is approximately a computer for every six students, which was the national average in the United States in 1998 (Becker & Anderson, 1998). Almost all the computers in the classrooms are connected to the Internet. A considerable number of software is available. The software include programs such as Number Maze, Turbo Math Facts, Math Blaster, Treasure Math Storm, AppleWorks, Writing Center, Spellbound, Sim Tower, Gizmos and Gadgets, The Incredible Toon, Adobe Photo Shop Deluxe, Kid

Pix Studio, Microsoft Power Point, Odell Down Under, Oregon Trail, and Netscape Navigator. The teachers interviewed preferred having computers in classrooms instead of having them in a lab. Kelly, a senior teacher who is like a computer specialist in this school, expressed her preference for computers placed in classrooms instead of in a computer lab as follows:

> Our former school had a lab but I didn't like it because it is not integrating. Everybody has to do the same thing. Either you can work on keyboarding or work on a software program. It wasn't integrating. You have to stop what you are doing and you have to go to the lab. You have to go a certain time even though it is not what you are doing at that time. Here, I keep an eye on the kids, and they can integrate in what they are doing right into the curriculum. (Kelly, February 4, 2000)

The school also has 50 AlphaSmarts for students' use. AlphaSmarts are simple and portable computers that allow users to enter and edit text, then send it to any computer for formatting or directly to a printer. An AlphaSmart can hold approximately 100 pages of single-spaced text in eight files. It weighs two pounds and costs about US$ 200.00.

Besides the computers, Green Hill Elementary is also equipped with three television sets with VCRs placed on carts for easy movement between classrooms, a digital camcorder, a digital camera, a scanner, and computer printers. Every classroom is also equipped with a telephone and a radio with cassette and CD player.

In addition to teachers welcoming the presence of computers in the classrooms and the school as a whole being equipped with a significant inventory of technological equipments, the students in this school are also very interested in computers. According to the teachers interviewed, most of the students are interested in and are good at using computers. A majority of them have one at home. Martha, the head teacher and Kelly who is a computer specialist view students' abilities in computers at Green Hill elementary as follows:

A lot of kids come skilled from home. Now we are in a process of putting together a mini lab in one of our teacher's room. She is going to do some real jazzy events, things with kids as well as working on web site things for the kids. (Martha, January 14, 2000)

I think most of them learn the basics of computers at home because almost every student has a computer at home. In the olden days when we first started you have to teach them how to use mouse, you have to teach them how to highlight texts to make it bigger or change the fonts. We don't have to do that anymore. I mean we just do it a little bit. I use to walk around and see someone who doesn't know what they are doing, I just tell them and they know but most kids just know it already from home and using it so much, and going to friend's house if they don't have it. So, it is really like you don't have to teach the basics. They already have it. You can just go on from there. (Kelly, February 4, 2000)

I observed that the students were always eager to use the computers whenever teachers gave them the chance. Most of the time, during the recess or before classes begin for projects, students were always seen using the computers.

The school's technology facilities, the eagerness and readiness of students to use of computers, and the positive feedback of teachers about the presence of computers in the classroom is not, however, reflected in the use of computers in project-based learning activities that I observed in classrooms. Teachers differed significantly from one another in terms of their perceptions about the use of technology in learning and in the level of its application during the project-based learning classes.

2. Implementation of project-based learning –The case of "Wild and Wonderful Wetlands"

Kelly, a senior teacher in this school, conducted this project class for 18 students who signed up for this project. The students are from grades one to three. Kelly has taught for more than 10 years in this school and had been involved in teaching projects in all these years. Besides teaching projects, she also teaches Language Arts and Math. According to Kelly, she doesn't really see much difference in her teaching either in the project classes or in Language Arts or Math Class as she said,

I don't because I teach it that way anyway. Like in my Language Arts class, I do themes and my themes are continents. I always do it in a project way, but I actually make it more academic, they have to do more writing they have to do in a research project on a country. So, I really don't see that much difference in my style. My style really fit in very well. (Kelly, February 4, 2000)

Even before Kelly started teaching in this school where projects are an important focus of the school curriculum, she indicated as having carried out projects in a non project-based school before. She expressed this as follows:

Before I came to this school, I really did this anyway. I had my own classroom all day long and I was able to implement projects that actually I felt I could do it better. I could do it in my Math class. I could do it in my Language Arts class. Here it is more isolated, you just do it for three weeks and the kids are gone. You don't develop as much of a rapport with the kids, and can't go into much depth. In some ways, it is too short. It is a little superficial in some ways. (Kelly, February 4, 2000)

Basically Kelly is positive about the effects of project-based learning activities on students' learning. She expressed this as follows:

One thing is that kids are excited about school and when they are excited about school they do better in everything. They enjoy projects so much that gives them

enthusiasm to come to school. Another thing is that when they read about it or hear about it in other subjects, they will say, Oh ya! I learned about that in Kelly's project. I already know this much about it and I want to learn more. So, part of that also encourages them to be in it, or go home and talk about it with their families, and I think it just gives them the enthusiasm to learn. (Kelly, February 4, 2000)

Based on another interview question with regards to her observation of students' reaction to project-based learning, she gave both positive and negative views as follows:

First good and there is bad. The good is that I think they really understand what they have learned, they retain it better, they want to continue on their own what they have learned, they want to take their families in, they get more involved, they want to talk about it more. The bad is that it is not as academic as the morning things we do, so it is hard to get them do the writing or do a lot of reading in the area. It has to be more a lot of manipulative, hands on kind of things. (Kelly, February 4, 2000)

Although Kelly expressed some limitations of projects, overall she believes that project-based learning is the best way to learn. She commented on this as follows:

I feel that it makes it very exciting. It is really the best way to learn as long as you make sure skills are being taught as well and we cover that in the morning. I

know my own children have grown up in schools that have a lot of that. I feel

they really like it that way. (Kelly, February 4, 2000)

Kelly herself developed the curriculum she used for this project. The entire project was carried out in 11 lessons over a period of three weeks. Kelly adapted the lessons as the project class progress. Kelly used various instructional strategies for this project. Her strategies included whole class instructions and discussions, bringing in experts to speak in the classroom, field trips, and video presentations. Kelly used a significant amount of the project time for whole class instruction and discussions. Whole class instruction was used for explaining about wetlands, story telling, and presentation of facts to students. Kelly also read to the class about wetlands from books, newspapers, and pamphlets. Wetland experts who were brought into the classroom also used this approach when they explained about wetlands and the importance of preserving wetlands. Whole class instruction was often included with question and answer sessions. Kelly and the experts brought into the classrooms asked both open and closed-ended questions to the students. Some of the questions posed to students included: What is a wetland? What do you find at wetlands? What kinds of plants and animals do you find at wetlands? What are different kinds of wetlands? Why must we take care of wetlands? Etc. Students enjoy answering the questions posed to them.

Kelly organized three field trips during this project. In the first field trip, Kelly had the students' walk to a nearby creek to take samples of water and mud for observations in the

classroom later. The children enjoyed this field trip very much. This is reflected from my observation notes as follows:

At 1:25 p.m. Kelly and her students set out for their first field trip. The weather outside was very cold but it did not dampen the students' spirit. They were very excited to go on the trip. They sang as they walked to the creek. After walking for about 15 minutes we reached our destination. As soon as we arrived at the creek, the students took their turns to collect samples of water and mud from the creek. Students were not given any other task during this field trip. (January 27, 2000)

Two local wetland experts who came to the class to talk about wetlands led the second field trip. After talking and discussing about wetlands in the classroom, they led the students and Kelly to a different part of the same creek visited by the students in their first field trip. During this trip, the experts demonstrated the process of water entering a wetland by pouring a pail of water on a road surface outside the classroom. After this activity, they had the students walking along the creek. While walking along the creek, the experts asked the students several questions and gave explanations about plants, animals, trees, the creek itself and so on. I observed that most of the students were not very interested in the explanations and instead they were more interested in exploring on their own looking at various things, collecting leaves, and occasionally talking with their friends.

The third field trip was carried out during the last week of the project. Kelly took the students to a local wetland preservation organization. During this field trip, six parents assisted in transporting the students to the wetland organization. The parents were very cooperative and interested in helping. On arrival at the organization, the students, parents and Kelly were greeted and welcomed by John, a volunteer who works at the organization. John introduced himself and gave instructions for students to follow while walking around the wetland area. He took the students around the wetland area, explaining various parts of the wetland. Occasionally, he asked them questions. Again, I observed that students did not ask many questions. They were more interested in looking around and exploring by themselves. During this field trip, students were not given any specific task to do.

Kelly also used video presentation as an instructional strategy during the project. Kelly showed two videos related to wetlands. The students were asked to watch the video quietly. During the presentation, students appeared very quiet and expressed interest in what they were watching. After the video presentation, Kelly briefly explained about what they had seen. There was very limited interaction during the discussion.

Throughout this project, students were engaged in various activities. These activities included: listening to teacher and experts; drawing, coloring, and cutting out pictures of plants and animals; examining water samples and mud from wetlands using hand lenses and microscopes; exploring the wetland environment during field trips; and writing thank you letters to people who have helped during the project. On the last day of this project,

Kelly asked the students to construct a model of wetlands. I recorded my observation on how this class started on this day as follows:

> As soon as the students had taken their seats, the teacher told the class, "We are going to do something super fun today. You get to do wetlands. You will be provided with the materials and you can also use the water and soil you have collected during the field trip." Kelly told the class that she would prefer them to work individually so that they can take their wetlands home. Kelly also asked the students to finish a little early so that they can do the evaluation of the project. (February 11, 2000)

Kelly provided the students with the materials required for doing their models. These included styrofoam trays, multi-colored stiff papers, and plasticine. After providing the materials, Kelly guided the students on how they could construct their wetlands. She told them that they could use green colored paper as grass, and make stones, birds, and other animals using the plasticine. At this point one student asked if he could use some real grass from outside the class. Kelly agreed and let the students use some materials from the school compound just outside their classroom.

Throughout this project, the students appeared to be most interested in hands on activities. They showed preference for activities such as exploring on their own during field trips, building wetlands models, and drawing and coloring pictures. They least preferred whole class instruction. Although the teacher allowed the students to engage in various activities throughout this project class, the activities did not lead students towards

producing a final finished product incorporating all the activities. The students were not provided the opportunity to integrate all their earlier learning activities to form a coherent final product for the project. The teacher regarded the creation of wetlands models by the students on the last day of the project as a final finished product of the project.

Throughout this project class, assessment of student learning received very low priority. There was no attempt by the teacher to assess the extent of student learning during the project classes. In the last project class, essentially during the last ten minutes, Kelly distributed self-evaluation forms to the students. The objective of this evaluation was to provide a general feedback to Kelly about how students perceive the Wild & Wonderful Wetlands project. It was not intended to assess the extent of students' learning of the project. Kelly confirmed the shortcomings of the project assessment when I interviewed her as follows:

> Every teacher has the projects self-assessed. It is not real formal. They write down their favorite part of the class or something that they have learned and then I assess them. Mostly assessment doesn't go home until report cards are done. We do it only twice a year. So, I think it is not very helpful because we don't do it right away. (Kelly, February 4, 2000)

In summary, the main characteristics of the "Wild and Wonderful Wetlands" project carried out by Kelly and her students are as follows:

1. Throughout this project, most of the time students worked individually. There was very little interaction among students during the learning activities.

2. The curriculum for this project was designed and adapted by the teacher as the class progressed.

3. The teacher used various instructional strategies, which included whole class instruction and discussion, bringing outside experts into classroom, field trips, and video presentations.

4. Students were involved in various activities. However, they were most interested and engaged when doing hands on activities and while doing their own explorations during the field trips.

5. The many activities the students were involved during the classes did not lead them to produce a coherent final finished product, incorporating all the activities they had done during the project.

6. Assessment of student learning during the project was given a low priority by the teacher.

3. Technology use in the Wild and Wonderful Wetlands project.

As Kelly, who is like a computer specialist at this school, conducted this project class, students were seen to use more computer technology here than in any of the other projects observed. In this 11-lesson project class, beside the numerous text-based instructional materials, Kelly used video presentations and allowed students to use computers during most of the lessons. Kelly showed videos on two occasions as a

strategy to disseminate information to all the students. The students were very interested while watching the videos. After each presentation, Kelly briefly discussed the video contents with the students.

Kelly made specific arrangement to enable all the eighteen students to use computers during this project class. On the very first day of this project class, Kelly told the students how and when they would be using the computers. Although there were seven computers in the class, Kelly set up a computer use schedule where during each project lesson four students would use the computers before recess and four after the recess. Thus eight students were given the opportunity to use computers during each project lesson, except for the days when students were taken on field trips. Throughout this project, each student was given at least three slots of 30 minutes to use the computers.

Most of the time when students were assigned to the computers, Kelly would give them a specific task related to the wetlands. Kelly would ask them to use the Kid Pix program to draw animals, plants, birds, or other things related to what they were learning. Sometimes she would let them use the computers without giving any instructions at all. From my observation, I found that students always look forward to their computer time in class. On receiving the instruction from their teacher, students would rush to the computers and remain active and engaged in creating whatever pictures they were asked to draw. Sometimes, I noticed that students were just exploring the Kid Pix software. They would explore the various programs within the Kid Pix Studio software. Sometimes they would play games. Usually Kelly do not supervise the students on the computers very much.

Once in a while she would walk to the computer and appreciate the students' pictures. The following two observation notes reveal typical examples of computer use during this project class.

Kelly read out the names of students who will be using the computers before and after recess. She told the students that they could draw on the computers. They could draw bird, animal, plant, the creek they have recently visited or any other things that they saw while on their field trip. Immediately, the students assigned to computers before recess took their seats at the computers and started working. Two students started drawing animals. Another two students were just experimenting doing all kinds of things at the computer. After sometime, one drew an animal and the other drew a tree. (January 31, 2000)

After recess, students at the computers experimented on various things at the computers before attempting to draw what the teacher required. However, the students at the computers appeared very engaged in what they were doing and the teacher had no problems at all with their discipline. They were completely mesmerized in their work. (January 31, 2000)

Although Kelly provided opportunity for the students to use computers during this project, the use was limited to just drawing. The use was aimed at exposing the students to computers and keeping them engaged in class. Despite the availability of computers in

the classroom, the software, and their connectivity of the computers to the Internet, they are actually underutilized.

In summary, technology use in the Wild and Wonderful Wetlands project carried out by Kelly and her students are as follows:

1. Beside numerous text-based instructional instructional materials, videos and computers were used during the project-based lessons.

2. The teacher used a computer schedule to make sure each student gets an opportunity to use the computer for 30 minutes.

3. The teacher gave students specific tasks related to wetlands when they were assigned to the computers.

4. The students were very excited to use the computers and looked forward for their turn.

5. The students at the computers appeared very engaged in what they were doing and the teacher had no problems at all with their discipline.

Summary of findings on the use technology in project-based learning

The following are the summary of findings.

1. Despite the availability of adequate technological infrastructure in the school, the use of technology in project-based learning is rather limited.

2. Technology is used in project-based learning class as an "add on" rather than "integrating" it across the project.

3. Teacher's planning and practice of project-based learning activities were focused more on multiple instructional activities and less on the integration of technology.

4. There is a disparity between theory of technology assisted project-based learning and the classroom practice of project-based learning.

5. Assessment of student learning during the project was given a low priority by the teacher.

What can we learn from the American experience?

Although this study was conducted in the United States of America, I believe we have something to learn from it. The following are some suggestions on what we can learn and do.

1. Project-based learning can be adopted or adapted into our curriculum. Project-based learning as an instructional approach has a long history, a rich philosophical basis, and a sound theoretical framework.

2. Project-based learning can be better practiced in Malaysia and other South East Asian countries than in the United States. By nature, Asians are more cooperative and less individualistic. Furthermore, the Integrated Primary School Curriculum (KBSR) and the Integrated Secondary School Curriculum (KBSM) provide a suitable curricular environment for the implementation of project-based learning activities.

3. Smaller class sizes and bigger classrooms are needed for the implementation of technology-assisted project-based learning activities.

4. Technology should be easily accessible for teachers. Technological infrastructure in the classrooms can greatly facilitate integration of technology in the curriculum.

5. We should be ready to use and integrate technology into the curriculum when they are brought into the classrooms.

6. We should bridge the gap between theory and practice. Teachers as practitioners should have access to theory, literature, and practice of good instructional approaches.

Conclusion

Project-based learning is a time tested instructional approach. The use of technology in project-based learning can further enhance its effectiveness. If implemented appropriately, it can bring about multiple learning outcomes. Although this paper is based on a study conducted in the United States, as educators we can learn a great deal from the strengths and weaknesses of other educators, even from a developed country. However, we must be careful when introducing an instructional approach from another country. We must ensure that we have the appropriate physical facilities, technological infrastructure, and training before adopting a certain instructional practice.

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VIRTUAL CLASS ROOM: DESIGN AND IMPLEMENTATION

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Abstract

In this paper, we have shown that a design and development of PSU virtual class room (PSU-VCR) is successfully implemented. Our design framework is based on Java technology to ensure that it is a platform independent, not only for any computer terminals but also any mobile devices. All information can be viewed by using any web browsers that can run Java script. The server employs 3 services: web server, JRun server, and Oracle database server, as its application layer. A various kinds of information can be stored and retrieved via a web browser without requirement of programming skill. The project is being employed by the university main campus, and will be extended to its other four campuses.

1.   Introduction

The Internet has become a high potential platform for teaching and learning. The enormous capacity and connectivity of the Internet for delivering information have fostered a worldwide movement across all education levels to re-examine and evolve the current learning and teaching infrastructure. A number of applications serving such purposes have been developed [1], [2].

The WWW is an exciting and innovative front-end to the Internet. The WWW provides Internet users with a uniform and convenient means of accessing the wide variety of resources (pictures, text, data, sound, video) available on the Internet. The WWW provides an exciting new opportunity for distance teaching and learning. The WWW can be used by the distance educator to build a classroom home page. The home page can cover information about the class including the syllabus, exercises, literature references, and instructor's biography. The instructor can also provide links to information on the WWW that would be useful to students in the class.

In our project [5], we have designed and developed PSU (Prince of Songkla University) Virtual Class Room (PSU-VCR). The project is being employed by the university main campus. It will be extended to its other four campuses, Phuket, Pattani, Trang, and Suratthani, as a common platform of PSU distance learning, as shown in Figure 1.

Figure 1 Virtual class room plan to link between all PSU campuses

This paper is organised as follows: In section 2, a design framework of IDL is presented. A prototype system of PSU-VCR developed in our research centre is described in section 3. We conclude our paper in section 4.

2. A Design of PSU-VCR

Figure 2 shows the components and their interaction in our developed system. The participants in this system are students, faculty, support staff, and system administrator. All activities are done on a web browser without required of programming skill. Our system design framework is based on Java technology [6] to ensure that it can support any computer plate forms. Moreover, it is a fully distributed system where servers can be physically separated. To due with a large database, Oracle server [7] is used as a database engine in this project where it connects to the PSU registration server which also used Oracle to handle all PSU staff and students' profiles. Figure 3 shows a main system dataflow and its functions. The central database is provided by the registration office while the virtual class room database is developed and maintained by this project server.
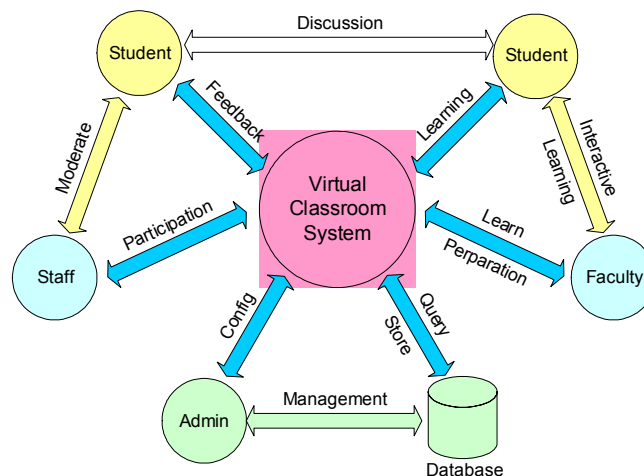
Figure 2 System flow and interaction
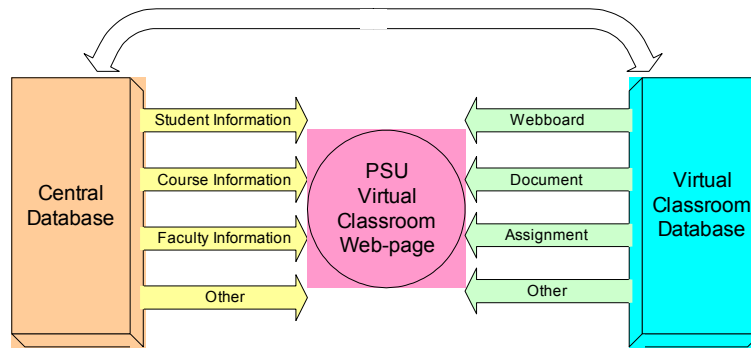
Figure 3 Main system dataflow

2.1 Features

The following materials can be stored in and retrieved from PSU-VCR:

- Voice - Instructional audio tools include the interactive technologies of telephone, all compressed audio, e.g. MP3,

- Video - Instructional video tools include still images such as slides, pre-produced moving images (e.g., MPEG movies), and real-time moving images combined with audio-conferencing (one-way or two-way video with two-way audio),

- Teaching materials - Computers send and receive information electronically. For this reason, all data are stored electronically. This includes e-books, hand outs for a lecturer, slides, assignment, and so on,

- Links of related materials – This could be links to other sources that relate to this subject.

The following main features are available in the web page:

- Information enquiry: all courses/subjects available in the university can be searched and viewed via the web page,

- On-line student profile: all subjects information enrolled by each student including the subjects status can be viewed by a student and his/her supervisor (need login and password),

- On-line class room: each student who enrols in present semester can participate in specified enrolled subjects. This includes on-line teaching materials, web-board, on-line assignments/home-works submissions, group news,

- Security: Each web-page has its own security level up on assigned appropriated person. For example, students are not allowed to upload course information to the web. All URLs are encoded to protect directly assess of un-authorised users. Moreover, all communications between any clients and server are done via SSL (secure socket layer). All activities are recorded in a log file kept for tracing,

- Management: Each subject may be evaluate by a person who has authority of management control, e.g. head of department. This feature may be used for quality assessment purpose.

2.2 System Architecture

The system is divided into two sides, as shown in Figure 4: client and server. In a server, it employs J2EE (Java 2 Enterprise Edition) in an application layer. The server uses J2EE to communicate with any clients. Servlets and JSP (Java server page) are used to create dynamic web page. All server parameters are kept in XML (Extensible markup language) format. To communicate with Oracle, JBDC (Java database connectivity) is deployed via API (application program interface) of Java. For security reasons, the PSU-VCR server

connects to PSU email server to check login password. JavaMail is employed for this

purpose.

On another side, client side, web browser is used as a communication tool. Since Java

engine is employed on the server, a web browser on a client terminal must be able to run

Java script. Cookies option on client must be open because cookies are used during

working. Moreover, web browser must support SSL (security socket layer).
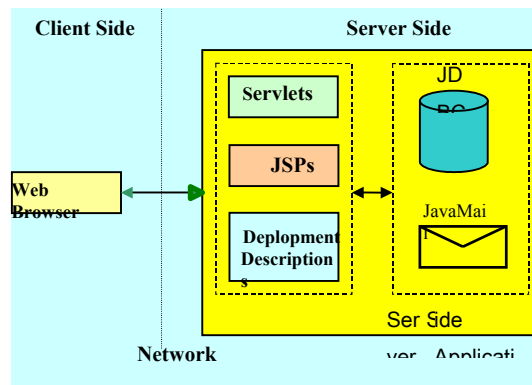
Figure 4 main components in VCR system

In this project, Apache is used for web server to communicate in HTTP protocol. In a

request is in JSP Servlets formats, the request will be sent to JRun server. If database is

required, JBDC will connect to Oracle database server (Oracle JBDC driver is required)

via SQL commands. Figure 5 shows all main server applications running in the system.
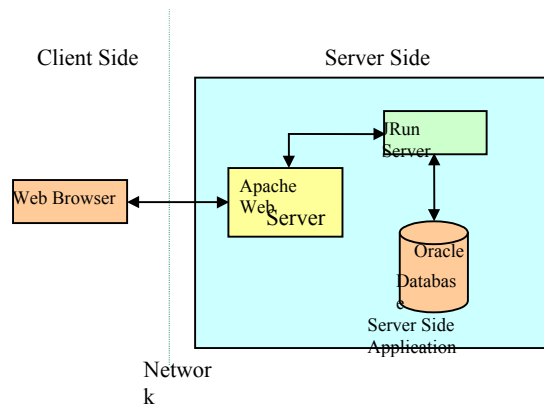
Figure 5 Main application servers in VCR systems

3.   **A Development of PSU-VCR**

In this section, we will show a few samples of the web page of PSU-VCR available in this recent version. **Figure** 6 shows a screen snap shot of on-line student assignment submission. In this web page, students who enrol in this subject can submit their works any time and any where. On-line submission icon is turned off after the assignment due date is expired.
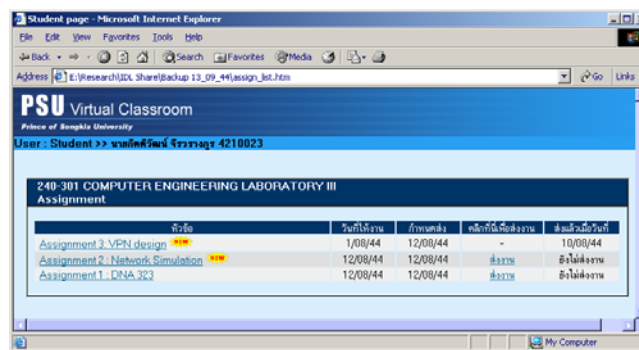
Figure 6 Example screen snap shot of on-line student assignment submission

Figure   shows a screen snap shot of on-line web-board. Each student can post his/her questions/comments to the web-board which belong to each subject individually. The

web-board allows not only text message but also any kinds of pictures and images. Moreover, the web-board has a built-in equation editor which is similar to Microsoft equation editor.
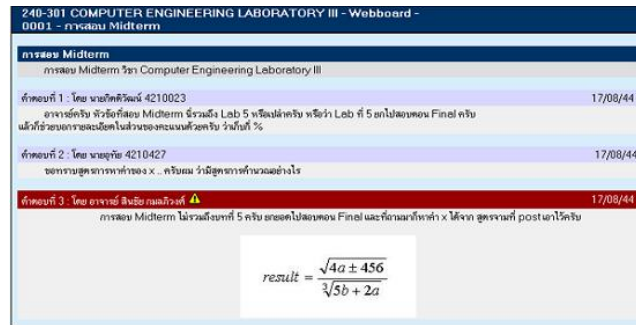
Figure 7 Example of screen snap shot of web board

Figure shows an on-line document uploading. A person who is given the right to update the documents, e.g. subject owner: lecturer, can upload any teaching materials using this page.
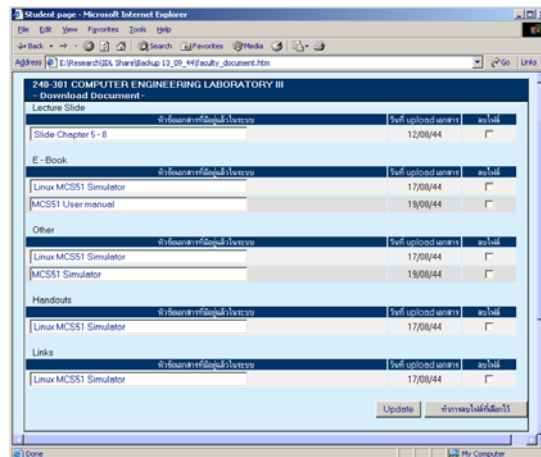
Figure 8 Example screen snap short of on-line document upload/update

4. Conclusion

In this paper, we have shown that a design and development of PSU virtual class room is successfully implemented. Our design framework is based on Java technology to ensure that it is a platform independent, not only for any computer terminals but also any mobile devices. Moreover, it is a fully distributed system where servers can be physically separated. The project is being employed by the university main campus. It will be extended to its other four campuses. In this work, a various kinds of information can be stored and retrieved via a web browser without requirement of programming skill. All necessary security requirements are implemented, for example, levels of authority, information encoder. We are working on a second phase of this project where an interactive distance learning will be developed [8].

Acknowledgement

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PROCEEDINGS   THEME 1   THEME 2   THEME 3   THEME 4

INNOVATIONS IN EDUCATION: UNDERTAKING THE PROBLEM-BASED LEARNING (PBL) CHALLENGE

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Abstract

Teaching English as a second language has experienced tremendous changes over the past two decades. Curriculum, teaching approaches, and teaching materials have been developed to meet the changing needs of the ESL population. However, the teaching approach of many ESL programmes are still linear and do not allow much room for individualised instruction. This calls for the concept of active learning as well as student-centredness within the classroom. This research describes the trials and challenges of an ESL practitioner in using the Problem-based Learning (PBL) approach in the classroom. It also discusses ways to help ESL educators who are new to PBL to gain a better understanding in order to embark on the implementation of the approach.

Introduction

Adopting a different approach to teaching and learning involves considerable risk. Successful experiences can motivate individuals; but failure can be frustrating not only to teachers but also the learners involved in the trial process.

Considering the Malaysian educational achievement scenario, with the emphasis on the English language in particular, there have been the dilemma regarding students' lack of proficiency in the language. It has been said that the quality has very much deteriorated over the years and that there is an urgent need to review or revamp the

teaching approach as well as methodology. Professional organisations, government agencies and the nation are calling for an innovation in language teaching and learning. It should address these matters: How can we improve the way the language is taught? What can be the end-product of a language class?

In answering the questions above, language practitioners should be innovative in exploring new and interesting ways to make learning more effective. The Problem-based Learning an approach is one worth working on. Nevertheless, because it is relatively new in the domains of a language classroom, it is not known whether it can achieve the desired objectives. This paper will explore how a language practitioner tried to use Problem-based Learning with her students. It will describe what is involved in the classroom. We hope that the description will be useful to other language practitioners who are interested in trying Problem-based Learning.

Literature Review

What is Problem-based Learning (PBL)?

Problem-based Learning first developed in medical schools in the 1960s and 1970s. Later, due to its success, it has been applied in a variety of other professional schools (Gijselaers and others, 1995). According to Savery and Duffy (1996), the use of PBL has been extended to an increasing number of areas including business, education, architecture, law, engineering, social work, and high school. Now, it is taking its place in a language classroom.

Problem-based Learning like the cooperative teaching methodology, share certain common features. The teachers who adopt the PBL method often find it difficult to differentiate the distinction between them. However, an essential component of Problem-based Learning is that the content is framed around the context of complex real-world problems. In other words, the problem comes first. This contrasts with the conventional teaching strategies where the concepts are usually presented in a lecture format, followed by questions or problems. Albanese and Mitchell, 1993 and Savery and Duffy, 1996 said that the problem created in a PBL task or activity provides the context of learning. This process requires the students to develop their own questions and frame the concepts in their own words rather than passively absorbing them from the lecture. In doing so, students must go beyond their textbooks to pursue knowledge.

The primary role of the teacher in the PBL classroom is to facilitate group process and learning, and not to provide answers. His role as a facilitator, as has been said by Howard S. Barrows (1996), is rather explicit. He doesn't give lectures or factual information, and he also doesn't tell the students whether they are right or wrong in their thinking. On top of that, he does not tell the students what they ought to study or read. This is in fact better understood as metacognitive communications.

With these changes in format pertaining to the roles teachers and students play in the classroom, as well as how the content is handled, come different forms of assessment. As reported by Kathy L Schuh (2001), rather than memorisation of facts, the approach to assessment in PBL seeks for indicators of the students' development as problem solvers by considering the quality and insight of their work and their enthusiasm as learners.

Why teachers should adopt the PBL approach

Problem-based Learning could indeed address many educational and administrative concerns. According to Dale (2000), students should be encouraged to produce original and critical ideas. The recent years have seen that this can be possible through enhancing problem solving skills among students. As such, the students should be exposed to problem solving strategies in order to handle added demands associated with learning. This is because the problem solving skills need to be taught to students. Giving students an opportunity to solve problems rarely develops their skill in problem solving. In fact, some faculties that implement PBL test their students' problem solving skills and abilities before they are allowed to enrol for a course using the PBL approach.

In a PBL classroom, there won't be any more of the conventional teaching style where the teacher gives lectures and provides students with the factual information. Instead, teachers are present in the classroom as facilitators or guides (LuAnn and Wim, 1996). On the other hand, students are encouraged to take charge of their learning. Given a situation, students need to identify what they need to know in order to better understand and manage the problem they are working on. Not only that, students are also required to find the relevant information from books, journals, on-line information resources, etc. This allows each student to personalise learning thus encouraging student-centred learning taking place in the classroom. The PBL approach, in other words, promotes critical thinking skills, learning strategies, and working co operatively with others.

Methodology

This three credit Public Speaking course has an enrolment of seventeen undergraduates from a variety of majors. During the implementation, data were gathered through observation and instructor interview. Ten observations were made; eight of the observations concentrated on the PBL classroom activities whereas another two were allocated for the evaluation purposes. The interview was conducted to triangulate data obtained from the observation.

Ms R

Ms R is university lecturer who is constantly pursuing innovative ideas in her classroom. Besides excellence in tests and examinations, she believes that students should graduate from her classes as a wholesome individual. In her classes, she promotes active student participation. Most of the time, she creates tasks and activities that make students feel that they not only belong to the classroom, but also determine the pathway of it.

Ms R, perceiving PBL

Ms R opened the interview cum conversation with a personal quote, "Life is full of problems. These problems MUST be settled, by hook or by crook". In light of this matter, Ms R strongly believes that everybody is born with the capacity to do so. However, some require an extent of exposure and training. PBL, carried out in its proper sense within the undergraduate classroom can prove her opinion is indeed right. Being equipped with problem solving strategies, her students should be able to mature through life experience in handling everyday problems and sharing the learning process and product with others.

Ms R, embarking on PBL

In exploring the new dimension in the teaching learning process, Ms R learns to know about Problem-based Learning. Every time she visits the clinic, she would be referring a myriad of cases to the doctors. And at each visit, she feels satisfied and contented with the way each different doctor handles each and every of her case. She wonders what kind of professional training is provided to these people that make them very confident and efficient in handling, most of the time, different patient, different health problem, at different places. She believes this approach should be implemented to other areas of learning. Her first step to convincing others regarding the strength and benefits of this approach is to do it herself. Thus, she embarks on her pursuit of success.

Ms R has read about Problem-based Learning as it was used in medical schools. It seemed that the pedagogical principles of that approach could apply anywhere, including language. The classroom given an alternative between a writing and speaking

class, she chose to work on PBL with the latter. Being undergraduates, the students are capable of handling critical thinking and problem solving activities. The speaking class is an advantage to her for students come to class everyday expecting and anticipating speaking activities; be it an individual speech presentation or extended group discussion. Sometimes, she has to deliver lectures on the theories of speaking. Nonetheless, she makes sure that she allocates space and time for students participation.

Ms R, implementing PBL

Her class comprises students from different age groups, race as well as majors. Altogether there are seventeen students, four females and thirteen males. Her first impression is that they belong to a mix-abilities group with different levels of English language proficiency. Most of them are rather quite and introvert.

Prior to PBL, Ms R had ice-breaking activities and introductory speech practices as well as evaluation/ presentations. From there, the students got to know each other. When she observed that her students have reached certain readiness level, she embarked on the PBL approach.

The second evaluation component in the Public Speaking course is informative speech evaluation. Students are required to present their presentations in groups. They were given 5 weeks to prepare for the presentation. They should also fall back on the principle of the informative speaking namely credibility, intellectual stimulation, creativity, relevance and emphasis. In order to achieve these, they must understand that

they have to fully develop their topic and content, and dedicate a big portion to ensure good delivery. Ms R thinks that PBL should come in at this moment.

Ms R, dividing the groups her way

Ms R divided her students into four groups. In order to invite the students in the group division process, she asked for four names of the most senior students in the class. Next, they had to suggest names of the youngest among them for each group. The students were reminded that each group, which already had senior and a junior member, should comply to two other categories namely there should be both male and female gender as well as multiracial composition. What she tried to do was to assign students to different groups with the objective of maximising heterogeneity without making any group unbalanced. According to her, she would prefer guiding her students through PBL group formation. The reason being she wants the students to know that she is a part of the team. Although they finally get to choose the members, as well as their specific problems, they also know that they would always have the lecturer as a facilitator for guidance.

The students immediately sat in their own groups. The first thing they had to do was to elect a leader. It so happened that all four leaders were the seniors. Next, they were given the theme of the day: Environment. The theme was chosen to create more awareness about the deteriorating quality of the environment, especially in Malaysia. They were told to decide on one environmental problem that they are most curious about. Not only that, the problem matter should have some significance in their lives.

Ms R, taking the PBL challenge

The students came back to class the next day. The first problem the group representatives claimed was the difficulties to find resources. Ms R motivated them not to limit their search to one source. Instead, they should think of ways how they can get access to as many resources as possible. Ms R observed that besides leadership, the students learned about co operation as well as job specification throughout their PBL experience.

The second and last problem indeed was that the students found it impossible to meet in order to discuss their PBL assignment. Ms R asked them whether the real problem behind it was that it was 'impossible' to meet or just a mere 'inconvenience'. From this, the students realised the importance of time management, discipline as well as group communication. From then on, Ms R only concentrated on class practices based on group problem solving practices and group presentation.

Basically, the class momentum followed a rather flexible mode. In the beginning stages when the students were rather less confident with the topic, Ms R triggered their group discussions using several questions like, "What's the extent of the problem?", "Can you identify the causes to the problem?", "How can you contribute to the problem solution?". After a few sessions, the students could independently carry out discussion as well as pose questions to either elicit or justify information. Throughout the four weeks implementing PBL in her class, Ms R observed that the students developed to be more friendly and comfortable with each other. Each group, in particular, became closer together. Ms R thought that the class was going rather well.

For the following classes, Ms R introduced several new PBL group discussion activities concentrating on problem solving, group decision making and presentation skills. At the same time, she also checked on the students to ensure that they were doing their research on the environmental assignment and if they faced any problems.

Ms R, evaluating the students

As for the evaluation, Ms R employed the Informative Speech Evaluation sheet as used by the department. Among the components evaluated are the introduction to the speech, content, as well as delivery. The students were given 15 to 20 minutes to present their speech, each determining their specific roles throughout the presentation. 25% was allocated for the Informative Speech Evaluation component. 5% goes to the complete outline and 20% goes for the presentation proper. Students are encouraged to use visual aids to enhance clarity and effectiveness. The same marks were shared by the group members. Feedback is also given in the context of the group effort. Based on the students' response, the PBL group evaluation succeeded in instilling the values like teamwork and peer support. Especially for a speaking class, the critical thinking and group decision aspects in PBL as well as task specification allow each of the members to contribute, based on their individual strength and speciality.

Ms R, reflecting through teaching

Looking back, Ms R felt the accomplishment of what she has done with the group using the problem based learning approach. She said, "I believe I have motivated a number of students and this gives me the sole satisfaction in facing the never ending challenge of a teaching career." She could see that the students were more confident in their cognitive and oratory skills. She attributes this to the nature of PBL which sets a expectation for students' critical thinking and problem solution abilities. Moreover, the communication taking place in group discussion and decision making contributes to the students' progress that brings about teacher's satisfaction.

Ms R, concluding her attempt on PBL

When asked whether the satisfaction of this semester would initiate her to fully implement the PBL approach in the coming semester, Ms R remarked, "I have proven two things with this first attempt. One, students learn, acquire and apply knowledge through the PBL approach. Two, teachers acquire as much from any innovative ideas in the teaching and learning process."

The next attempt, in the case of Ms R, would be to convince a colleague or two who is new to PBL to try out the PBL approach. Some might be sceptical of the idea. Nevertheless, it's worth investing time and effort on an approach which might be new to the ESL classroom, but has been proven successful in the medical field as well as several other professional areas of interest.

Learning from Ms R

1. Be patient with students. Let the students set their own time frame, working at their own pace. Somehow they are all aware of their responsibilities to the group, collecting information, meeting deadlines as well as doing their best for the informative group evaluation/presentation.

2. Have faith in students' capability to handle the problems. Lecturers should limit their roles in their classroom as facilitators or guides. Sometimes, they should be prepared to give some motivation to the students.

3. The whole idea about PBL is enthusiasm. The teacher should be as motivated as the students. Students muster the courage to complete the PBL task. As for the teacher, he provides the framework and ensures the smooth undertaking of the whole process.

Conclusion

ESL learners vary not only in terms of their purposes of learning English, but also in terms of individual differences in learning due to their educational, ethnic, and cultural diversities. To make ESL teaching successful, ESL educators must make efforts to create optimal learning environments for learners. Educators should employ different methodologies and approaches to maximise students' learning. Teachers should plan lessons to match students' diverse learning styles.

However, it is important to remember that some methodologies and approaches are still in their infancy, and need further testing through classroom application. This applies to Problem-based Learning. No matter how enthusiastic a teacher might be to try this a new approach, there are several difficulties and challenges along the way. For

example, instructors might create less significant problems to trigger the whole process of learning. Frequently, there is also lack of support from colleagues who don't understand the method. Another problem might be the fact that most classrooms do not lend themselves to a Problem-based Learning format.

In a nutshell, as ESL professionals, we need to make the most of the teaching environment so that hopefully it can maximise our students' learning. Each encounter within and beyond the classroom should inspire insights and innovation in the teaching and learning process. In undertaking the challenge of PBL in the ESL classroom, Ms R leaves us with a quotation to ponder.

"The teacher's will, paves the way".

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MANAGING VIRTUAL REALITY IN ROBOTICS TEACHING

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Abstracts

Virtual Reality (VR) simulations can be a very powerful tool in the hands of architects, engineers and scientists. With it enhances features it could be a turning point where it gives a new interesting and exciting environment that could motivate students' learning and interest in particular subjects. The research problem under consideration presented in this paper is important on several theoretical and practical grounds. Physical robot costs thousands of dollars. Many institutions cannot afford to facilitate enough physical robots to cater for all robotics students. Due to this problem, it is necessary to have a virtual robot system for the students to practice on it before actually operating on the real robot. The mission of this system is to make students familiar and understand the task operation of the robot before class, during and after class. The steps involved in achieving the objective were conceptual background studies on robotics teaching, prototype design and development and testing on polytechnic students who took robotics course. The issues concern the statistical data found on testing, costs involved and the relevance of technological developments of VR in robotics teaching were discussed.

1.0 Introduction

As the dependence on computer increased, it has resulted the rapid development of faster microprocessor that provides faster central processing units (CPU) and better graphics display cards. This has resulted in the widely use of computer graphics in assisting many

tasks. Computer graphics has made it possible for the average home-user to explore the new era of technology commonly known as Virtually Reality (VR).

VR has captured the imagination of many researchers and teachers in universities and industries around the world. There were many articles and books written on VR describing the concepts, devices, benefits and potential applications in everyday life. Ever since it was first introduced by Sutherland 35 years ago, the research projects in universities or industrial products that reached the marketplace is fairly limited. The largest application for VR is in game products. However, through out the later years, more attention is being paid to VR application in education, surgery, simulations and training, as the future use of this technology is very promising.

The term 'virtual reality' is used to describe a technology that enables interactive real-time viewing, makes the world on the window look real, sound real and feel real [1]. It was also characterized as the illusion of participation in a synthetic environment rather than external observation of such an environment. VR relies on 3D, stereoscopic, head tracked displays, hand/body tracking and binaural sound. VR lets you navigate and view a world of three dimensions in real time, with six degrees of freedom (d.o.f.). In essence, VR is clone of physical reality [2]. VR, in many ways has created an opportunity towards assisting and enhancing the educational process and techniques. One of the characteristics that VR provides is *constructivism* hence enables to create a 'learning by doing' atmosphere [3].

Students who were taking the robotics courses in universities confronts with the problems of the basic robotics principles understanding due to lack of exposure. The same problem occurs in universities, as more robotics equipment is needed to fulfill the needs of more students.

The major problem facing many institutions proposing a course in robotics is the amount and type of students' exposure to real robots [4]. It is important for the students to be exposed to the robots in their learning process. During practical sessions, each student is expected to have access to the robots and study them. Due to the physical robot being expensive, many academics institution cannot facilitate enough robots to the entire class. Therefore, utilizing VR as a tool to develop fully functional 3D virtual robots can substantially minimize the ownership cost.

This research will put forward the idea of using VR as a teaching and training tool in robotics, by first building the prototype of visual robot arm by using the Virtual Reality Modeling Language or VRML and finally to evaluate the outcome as a means to facilitate robotics courses (with the emphasis on the robot arm). The project will use an affordable, non-immersively VR system. It allows user to navigate and interact with a 3D computer-generated display by using a conventional desktop system.

2.0   Utilities

The basic system requirement for the hardware application will be:

PC system : Pentium-200 MMX or equivalent

RAM : 32 MB

CD-ROM speed : 4X

Video Mode : SVGA with 2MB of video memory

Hard Drive : 450MB

3D Accelerator Board : Yes

Interaction paradigm in VR that makes it feasible for the virtual robot to be implemented is described as below [5].

Camera Control

Observation of the scene is essential to the user, because it provides information about his/her location in virtual world. Intuitive camera control is responsible for the immersion feelings in VR. Camera movements can be steered by using mouse, joysticks or spaceballs devices.

Navigation

In many cases, user may want to explore the whole environment. This could be achieved by using appropriate medium. For the use of virtual robot, hand directed style is used. Position and orientation of hand determines the direction of motion in virtual world.

Selection (object picking)

To perform any action that causes the change of virtual world state, the user must first select the object that will be the subject of manipulation.

Manipulation

Once the object is selected the user must be able to manipulate it: move, rotate, scale, change attributes etc. This can be achieved by defining special button presses, hand gestures or menu entries that choose a proper tool. These tools can be driven by physical input devices like mice, joysticks, sliders, gauges and hand position tracking.

Information accessing

Virtual reality with its broader input and output channels, autonomous guiding agents and space metaphors offers the enhancement of human perception and makes information searching and understanding faster.

3.0   Results on Pilot Study

They were 28 students involved in the survey. The questions in the survey were developed by referring to the techniques suggested by most researchers in investigating VR research. One of the research was to measure presence in VR and was adapted in categories; autonomy, the extent to which the VE is more than a passive geometry,

interaction, the degree to which VE parameters can be modified at runtime and presence, the measure for the number and fidelity of available sensory input and output channels [6,7]. For the questions on the VRS, the questions were based on the guideline of robot functions; quick response, flexible device, safety, ergonomic, training and man-machine relationship [8,9]. Questions on the VR technology consist of the issues on the attitudes towards VR in 3D representation, functionality inclusive the animation, real time interactivity, navigation and ergonomic issue; ease of use, easy to understand and user friendly. The effects of disorientation and stress were also studied. The questions were designed in such a way the students can choose the answer ranges from disagree to very agree scaled 1-5 in a 'close-ended' question [10]. The second criterion was concentrated in finding feedback on the VRS performance. The issues concerned were safety, response, functionality, flexibility and level of familiarity.
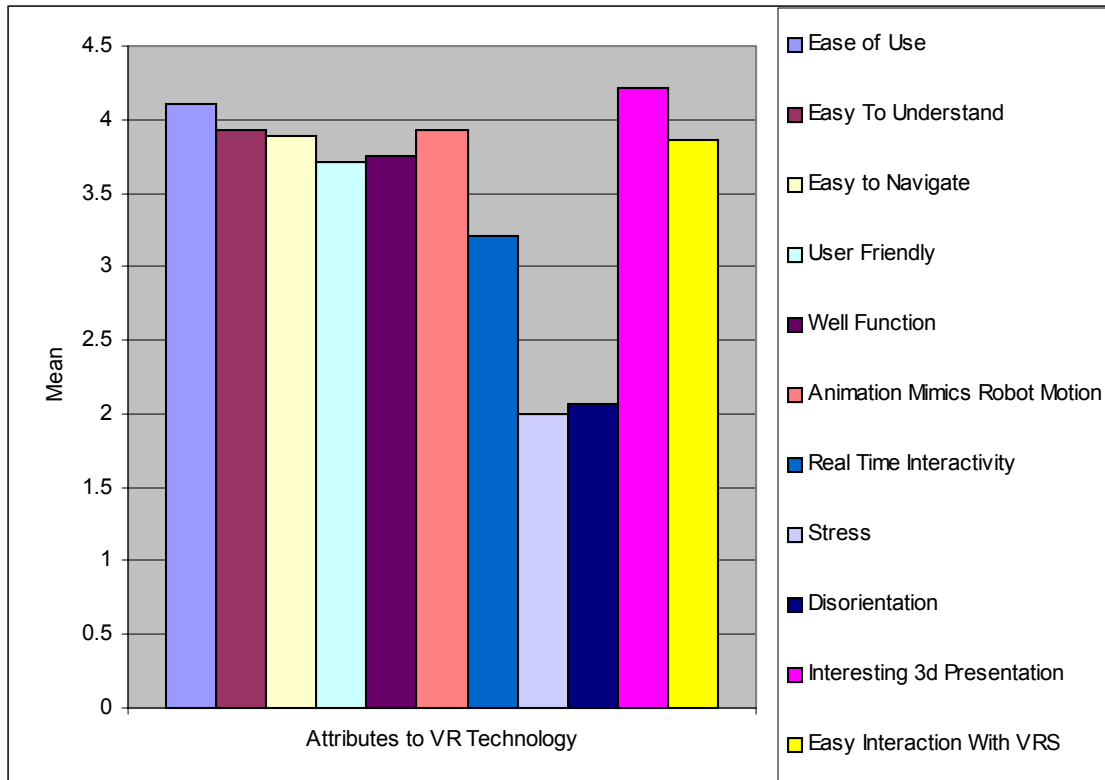
GRAPH 1. Answers on VR Technology Questionnaire

In terms of using VR technology, the results were quite overwhelming as the students agreed to most advantages of VR technology and the VRS. Graph 1 shows the mean for every attribute. The highest mean in the graph is interesting 3D representation attribute while the lowest mean is they did not get stress while experiencing VR technology. 85.7% agreed that the system is 'ease of use', 82.1% agreed that the system is easy to understand, 75% agreed that it is easy to navigate, 64.3% agreed that it is user-friendly, 57.1% agreed that it is well function, 82.1% agreed that the animation shown mimic the real robot movement, 89.3% agreed that presentation in 3D is interesting and finally

71.4% agreed that it is easy to interact within the VE. One feature that the 60.7% of the students answer not sure was to term real-time interactivity in the environment.

Legend:
- Quick Response
- Ease of Use
- Safe to Use
- Easy Instruction
- Quick Response
- Well Function
- Low Level of Familiarity
- 6 d.o.f view
- Easy To Understand
- Interesting Learning Environ.
- Flexible Device
- Mimics Physical Robot
- Color/Texture Mimics the Physical Color
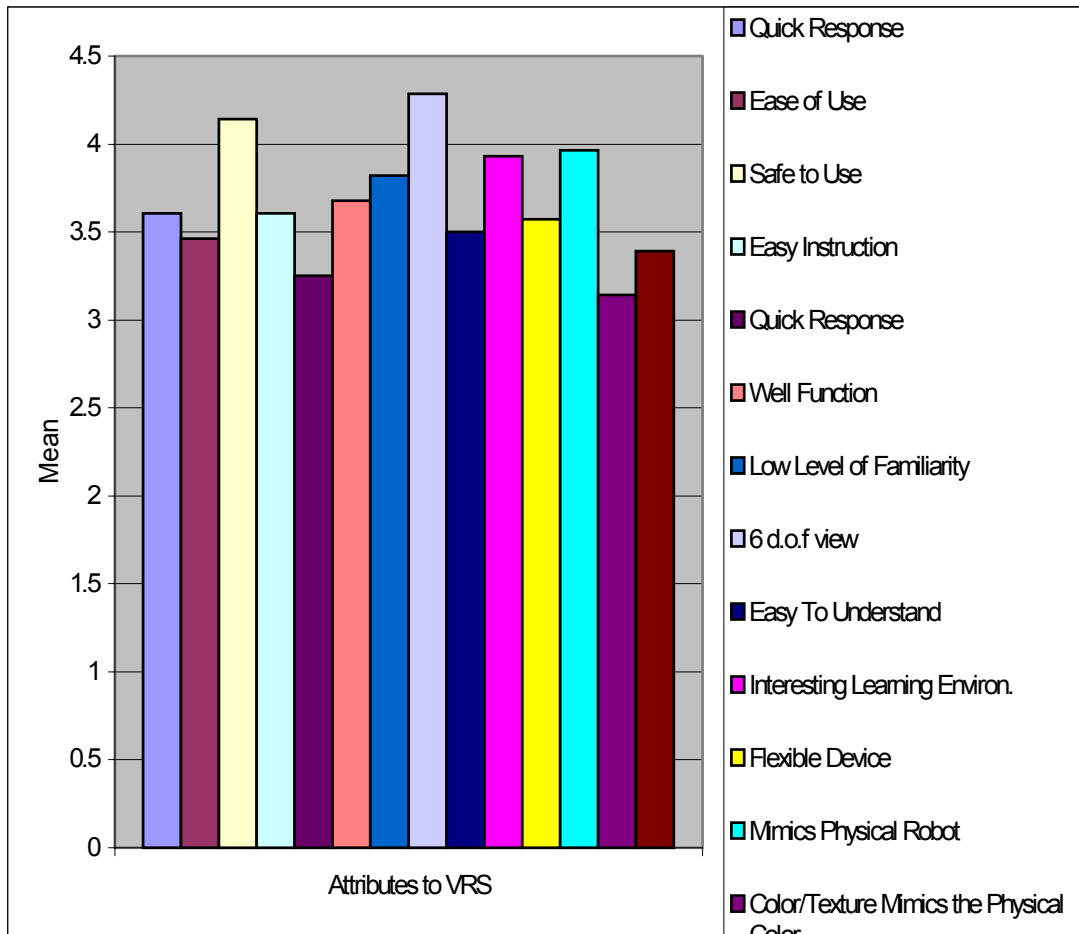
GRAPH 2. Answers on VRS Questionnaire

In the section of VRS attributes, the highest mean is 6 d.o.f. view attribute and the lowest mean is the color/texture of virtual robot mimics the physical robot attribute (Refer Graph 2). 64.2% agreed that the set-up time is quick, 64.3% agreed that it is ease of use as it is still comfortable after long hours of usage, 85.7% agreed it is safe to use, 71.5%

agreed that it needs low level of familiarity to use the system, 75% agreed that the robot can be operated without much instruction, 96.4% agreed that the system can be viewed in 6 d.o.f, 57.1% agreed that learning becomes easier using VRS, 78.6% agreed that VRS is an interesting learning environment and 50% agreed that the VRS is flexible, 75% agreed that the 3D robot represents the physical robot and 50% agreed that the virtual environment imitate the physical robot environment. One of the students mentioned that the movement of the robot arm mimics the physical robot but the students still need to refer to physical robot in terms of manipulating the robot codes.
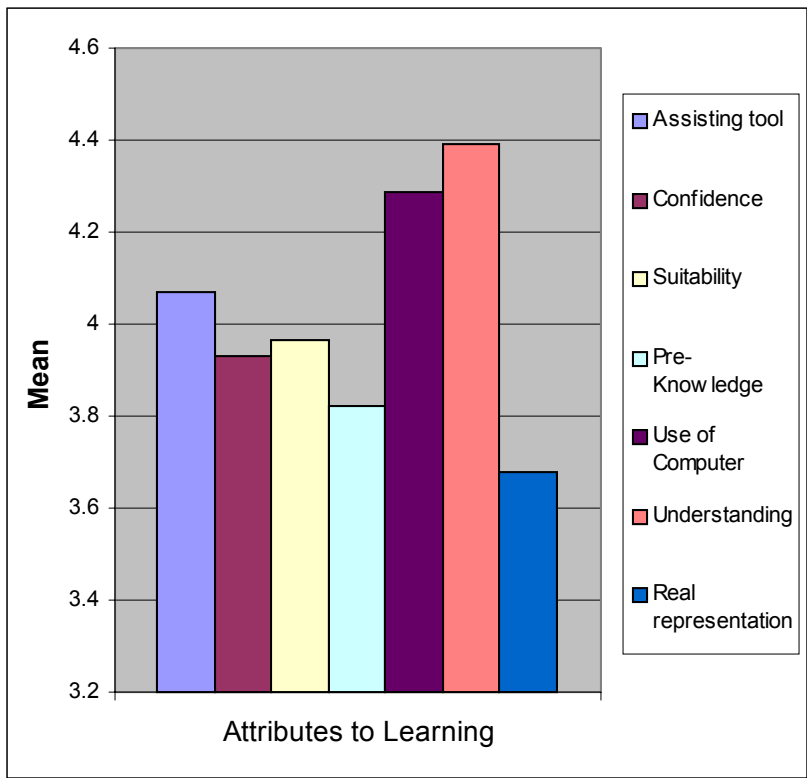
GRAPH 3. Answers on Learning Questionnaire

For the attributes to learning process (Refer Graph 3), 78.5% agreed that this system is a good assisting tool, 78.6% agreed that this system gives more confidence in learning robotics, 82.2% agreed that the system is suitable for this topic, 75% agreed that pre-knowledge of robot is needed prior to the testing, 92.9% agreed that the use of computer is important in learning robotics, 100% agreed that the viewing in many angles give more understanding about the physical robot and 67.8% agreed that the rotary motion shown imitate the physical robot motion. The highest mean for this attribute is the viewing in many angles and the lowest mean is the rotary motion.

4.0   Discussion

Interactive 3D graphics and VR hold great promise as tools for engineering. VR has potential for research in engineering education as it allows students to create, manipulate, and analyze 3D models relevant to their areas of study [11]. VR was regarded as a different mode of educational delivery when it allows affective learning to occur anytime, anyplace [12]. It is also agreed that visualization and representation of 3D objects has always been a central part of engineering. Another example of VR application in engineering education is the simulation and animation to enhance student's learning in mechanical engineering. Besides physical equipment, it is emphasized that educational computer program must have an interesting graphical user interface including visualization and animation to motivate the users [13].

It was described that the critical feature of VR is believability, which is attained through high degrees of immersion and interaction [14]. VR also addresses Bloom's Taxonomy in an alternate learning styles as in VR simulation, students are free to explore, and to examine their environment from any vantage point they desire and finally experience, the main feature of VR, is of great benefit to the learning styles.

As applications and technology are evolving rapidly, employers are finding it necessary to spend more time and money training their employees. Computer-based training (CBT) is gaining widespread acceptance in the marketplace as a cheap supplement or even an alternative to instructor-led training. VR technology is being used for training in many sectors but because of the cost of implementing the technology, it became inaccessible to the marketplace at large. The VRML technology has become a solution that brings VR onto the desktop and makes 3D more accessible to the end-user. A yet compelling feature of VRML is the 'de facto standard' for 3D platform on the WWW. It has been around so long, its export tools are embodied in every significant 3D package [15]. The VRML was heralded as the next wave of Web advance as it is a cousin to HTML for 3D content; a file format to bring 3D to the masses.

Producing our own products software will eventually reduce the cost of buying license from foreign developers as commercialized software in the market cost thousands for one license copy. It is the aim of this research to go for a local-made product that is designed to be affordable and cost effective material for students. Using open source and free

licensing software like Cosmo World Editor, notepad and 3D modeler paves the way for this research to produce a cost effective application.

5.0 Conclusion

It was concluded that VRS can be operated at a minimum level of familiarity, easy to use and gave an interesting learning environment, the real-time interactivity feature gives students the freedom to operate the robot without the fear of damaging thus increases the confidence to operate the robot and VRS is safe to be used, as it didn't disorient the users to stress or dizziness. The results in the learning attributes showed that the virtual system did assisted students learning. It is relevant in the near future to enhance the system to provide a better insight of VR application in robotics teaching as it has a big potential to be commercialize to a bigger role in industry generally.

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ASSESSING COUNSELOR EDUCATION STUDENTS' ATTITUDES TOWARD COMPUTERS AND MULTIMEDIA INSTRUCTION

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Computers have become important tools in today's society and have proven beneficial in the field of counselor education and supervision and the use of computers have expanded into many areas of education including classroom teaching and supervision. Computer technology is also used to promote teacher-student interaction and provide the necessary feedback to the learner as many educators have become interested in the use of computers and multimedia. Thus, the purpose of this study is to explore the beginning level under-graduate counselor education students' attitudes to computers and multimedia instruction. It is hypothesized that student who received the multi-media instruction would have a positive attitude towards computer and multi-media instruction. This paper will also examine the support for the use of multimedia instruction in training counselor and as a tool to supplement and complement traditional method of teaching, especially in the counselor education and supervision

Introduction

Computer has become important tools in today's society and has proven beneficial in the field of education. The computer is a tool that can allow unprecedented access to other human beings and promise positive instructions with others which is vital in education and in life (Hyde, McMillan, & Mitra, 1983). As such, many educators have become interested in the use of computers and multimedia instructions, which serve as a tool to actively engage and stimulate students by enhancing the learning process. It also allows counselor and educators to interact more frequently. For example, multi-media computer technology is all used to promote student-teacher interaction and provide the necessary

feedback to the learner at a distance while the prevalence of computers in school has provided a new tool to enhance counseling interventions, an efficient ways for school educators to train and supervise students.(Grant & Robinson, 2000).

Through the 1980s, a series of articles in counseling-related journals and publications has addressed the use of computer applications in counseling and counselor education and has changed the way school educators fulfill their role (Myrick, 1997, Celcotta, Jacobs, & Keys, 1986). These changes incorporate the many ways information is retrieved and disseminated to others such as utilizing e-mail, video-conferencing, Web pages, online journals and newsletter. Various uses of these technologies were tried and implemented in the counseling profession and the helping environment with differing degrees of success. (Alpert 1986).

Training and supervision.

Advances in computer technology have played a major role in the changes to training and counseling supervision. D'Andrea (1995) states that computer technology has been used to supervise counselor education students in their practicum and internship experiences. New doors have also opened for counselor educators who have been hesitant in utilizing computer technology in preparing school counselor. Power point presentations have become more common, and many counselor educators are viewing applied technology as both a teaching tool and a necessary skill for counselors. Power-point presentations can engage audiences using sounds, visuals, and demonstrations (Cornell, 1999). Counselor

education students can learn how e-mail can be used to form networks. School counseling programs can teach their graduates students how to create web pages so that they will be able to develop web sites at their schools.

What do students think about the use of multimedia techniques for instructional purposes? According to Clements (1981) student's attitudes toward computer-based education have been positive at all levels-elementary school, junior high school and college. In a study conducted by Arndt, Clevenger & Meiskey (1985) on students' attitude toward computers, it was found that the students would want to acquire computers knowledge even if it were not helpful in the job market. His study further stated that students who perceived the knowledge of computer as important in their career viewed the computer as pleasing, as having a warm emotional impact and being effective and powerful and yet submissive. Grant and Robinson (2000) conducted a research study on forty-four beginning-level graduate counselor education students on their attitudes toward computers and multimedia instruction. Results of their study revealed a positive attitude toward computers and multimedia instruction. Their findings of the study also lend empirical support for the use of multimedia instruction in training counselors and as a tool to supplement and complement traditional methods of teaching. Thus, although computer technology has not revolutioned counselor education or the profession, it has become, in some cases, a useful supplement to existing methods of training and practice. The purpose of this study is to assess student's attitudes toward multimedia instruction in an introductory class in counselor education.

METHOD

-Participants

The sample consisted of 289 undergraduate university students from Universiti Pendidikan Sultan Idris, Tanjong Malim, Perak. The participants were enrolled in an undergraduate counseling theory and technique (KKT 1013) course.   The samples consisted of 120 were male and 169 were female. The average age was 23, ranging from 21 to 30 years old

-Instrumentation

The Misfeldt and Stahl's (1991) Attitude Survey questionnaire was used for this study. This questionnaire is composed of 30 questions based on a 5-point Likert Scale, which is used to determine attitudes towards computerizations. Choices ranged from strongly agree to strongly disagree.

Procedure.

When the samples registered for the theory and basic technique class, they were not aware of the teaching approach used. No random sampling or random assignment of participants was done because the students were assigned to the classes through the university 2002/2003 session enrolment process. Each participant reviewed three-credit

unit for the course. The class met twice a week in a high-tech classroom. The students were exposed to multi-media instruction approach in the classroom teaching.

Findings

A frequency distribution was used to examine the frequency and percentage of student's responses on the Attitude Survey. As expected, results of the study showed that students have a positive attitude toward computers and multimedia instruction. Students responded positively that computer helped increased productively in the educational process (78%)and helped to achieve a higher quality of learning (76%). Most students (85%) disagreed that computer used in teaching threaten teachers and are to time-consuming and be worth the effort (77%). to achieve a higher quality of learning (76%). In addition students responded that computer could individual instruction to better meet the needs of particular students (81%). Many students (76%) disagreed with the concept that computers are only useful in science to technical education. Most students (83%) agree that computer help students. Finally, students responded favorably that computers help to motivate students (66%) and increase creativity (77%).

Discussion

Results of the study show that students have a favorable attitude toward computers and multimedia instruction. This finding was consistent with previous research conducted by Grant & Robinson (2000). The result also shows that most students responded that

computers help increase productivity in the educational process. Morell (1992) suggested that due to the positive attitudes students generally have toward working with computed-assisted units, it is an area that merits further research. Multimedia instruction is an approach to complement and supplement traditional methods of teaching. Though this study provided some valuable insight into the use of multimedia instruction in classroom teaching, future research is necessary. Grant & Robinson (2001) suggested that future research assessing students' attitudes toward the Internet, Web-based instructions, and distance education in counselor education is also necessary. He further suggested that a focus on Internet addition as well as phobias toward technology would also provide significant insight in the use of multimedia.

The findings of this study have important implications for counselor educators. Because students have favorable attitudes toward multimedia instructors, a classroom environment using this instruction delivery method may be desirable to counselor educators. Granello and Hazler (1998) suggested that it is time for the profession to take more formal stance and give more emphasize to the process of teaching, rather than just the content. Lind (1998) noted that teachers reflect their own knowledge on media for pupils by presenting things by choosing the media to illustrate their points by assessing and analyzing the media they use, and by developing instructional materials for their class.

Conclusion.

The use of computer has proven beneficial in the field of education. It has also contributed to the students positive attitudes toward computer as stated in the study. This paper has looked into the students' attitudes to computers and multimedia instruction. Results of the study show that students have a favorable attitude toward computers and multimedia instructors. The findings of this study have important implications for counselor education. It is time for counselor educator to use computer and multimedia instructor as an approach to complement and supplement traditional methods of teaching.

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LEARNING MODES OF UUM MBA STUDENTS

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Abstract

In this knowledge era, the way knowledge is acquired is an interesting issue and is an important research agendum among business educators. This paper looked into the learning modes of MBA students at the Universiti Utara Malaysia (UUM) as a case in point. Specifically, it sought answers to the following questions:

(1) What is the preferred mode of learning among UUM MBA students?

(2) Are there significant differences in the students' learning mode grouped by gender, marital status, breadwinning status, academic status, race, age, work experience, position in the company, and subject load?

(3) Is learning mode significantly influenced by the abovementioned variables?

Respondents included 123 MBA students in Sintok and Sungai Petani centers. Data were gathered using a Personal Learning Style Inventory (Wyman, 1999) and analyzed via SPSS at .05 alpha. Findings revealed that the respondents had an overall "kinesthetic" learning mode. Across independent variables, learning modes significantly varied when respondents were grouped according to gender, with the males showing a kinesthetic learning mode while the females, an auditory learning mode. Subject load was positively and significantly associated to learning modes.

Introduction and Objectives

The elements of the learning style had been discussed in many literatures as early as 1892 (Fatt and Joo, 2001), with a prevailing view that different people acquire skills and knowledge and learn in many ways. However, some educators often think that everyone ought to learn the same way. But a growing body of research makes it clear that there are a number of different, yet equally valid, ways of people gaining knowledge and skills. Ideally the way that teachers teach should match how students learn (Fatt, 2000). Therefore, the main concern of every educator in order for students to learn in an effective manner should be the learning styles of every student. Educators can then adapt their styles of teaching to match the learning styles of the students. Dunn and Giggs (2000) have convinced hundreds of administrators and teachers of the effectiveness of first identifying and the complementing how each student begins to concentrate on and retain new and difficult academic information and skills.

The concept of learning styles has been viewed in various perspectives. According to the National Association of Secondary School Principals (1979), learning styles refer to the cognitive characteristics of learners, their affective and psychological behaviors that indicate how learners perceive, interact with, and respond to the learning environment. Sadler-Smith (1996) defined learning styles as distinctive and habitual manners of acquiring knowledge, skills or attitudes through study or experience. A more recent definition was given by Dunn and Griggs (2000) who defined learning style as the way students begin to concentrate on, process, internalize, and remember new and

difficult academic information, comprising both biological and developmental environments, methods, and resources.

Learning style indicates the tendency of a particular learner to adopt a particular learning strategy. It is a habitual manner whereas learning strategy is a conscious attempt to deal with a particular situation derived from the drawbacks of the style. Although many learners can master easy information in the wrong style for them, they do so more efficient and rapidly when they capitalize on their learning style strengths. Once learning styles have been identified, instructors then can estimate the processing approaches, methods and sequences of perceptual exposures to resources that are likely to make learning more comfortable and meaningful to each learner.

On works about learning styles, that of Peter Honey and Alan Mumford's has been applied widely throughout the world in recent years. It has been acknowledged that their approach has been salutary in emphasizing that people do learn in different ways and that uniform approaches to education and training will not be suitable for each individual (Caple and Martin, 1994). Literature also shows that the learning style of individuals is determined by several factors. Price (1980), for example, argued that learning style varies with age while Milgram, Dunn and Price (1993) concluded that achievement levels of individuals also do have some influence in their learning styles. Other factors include culture (Dunn and Griggs, 1995) and physiological factors cited by Vincent and Ross (2001) such as visual (seeing/pictures), auditory (hearing) and kinesthetic (touching/physical).

In terms of each individual learning styles, Dunn and Stevenson (1995) referred them as the ability of each individual to acquire new and difficult knowledge in the following situations: environmental, emotional, sociological, psychological, and global/analytical, which are determined through the correlation among sound, light, design, persistence, sociological preference, and intake.

Learning styles have also been categorized in various ways. Feldler (1996), Honey and Mumford (1992), Kolb (1984) and Senge (1992) shared views of the following learning styles: *activists* (people who like to try out new experiences, open-minded, innovative, and extrovert); *reflectors* (observe and ponder experiences and prefer to be left alone when working on any assignment); *theorists* (prefer logical explanation rather than facts in explaining something); *pragmatists* (tend to like putting theories into practice); *sensing* (tend to be patient and like detailed work and usually solve problems first by collecting facts before making any decision; *intuitive* (prefer non-routine calculations that require memorizing and are comfortable with new concepts); *visual* (absorb information more effectively from pictures, diagrams, charts or demonstrations); *verbal* (understand things better by talking and discussing matters with peers and groups); *sequential* (gain learning and understanding from logical explanations and steps and usually follow procedures that "work by the book"); and, *global* (solve complicated problems efficiently but find difficulty when asked to explain how).

Vincent and Ross (2001) advanced these types of learners: *linguistic* (good at memorizing names, places, dates, and other detailed information), *logical-mathematical* (have the capacity to work with numbers and engage in higher order thinking), *visual-spatial* (think in terms of physical space), *musical* (show sensitivity to rhythm and sound), *body-kinesthetic* (use body movement in learning and expression), *interpersonal* (have the ability to understand and interact with other people), and, *intrapersonal* (have the ability to understand themselves, their interests, and goals). Reichmann and Grasha (in Sadler-Smith, 1996) identified three types of learning preferences: *dependent* (prefer teacher-directed, highly structured programs), *collaborative* (discussion-oriented and favor group projects and social interaction), and *independent* (exercise an influence on the content and structure of learning programs). Tickle (2001) also cited the *deep* (require access to semantic features) and *shallow* (analyze physical features of stimuli) processing styles.

Wyman's (1999) theory, which served as the framework of the present research, clustered learning styles into three modes: visual (seeing), kinesthetic (touching), and auditory (hearing). Vincent and Ross (2001) also recognized these categories, and concluded by saying that learning should be as personalized as possible.

This study, thus, attempted to assess the learning modes of students in the postgraduate level using Wyman's classifications. Specifically, it sought answers to the following questions:

(1) What is the preferred mode of learning among postgraduate students?

(2) Are there significant differences in the students' learning mode grouped by gender; marital status; breadwinning status; academic status; race; age; work experience; position in the company; and subject load?

(3) Is learning mode significantly influenced by the above-mentioned variables?

Better understanding of the learning styles and their characteristics not only benefit educators but learners as well, pointed out Vincent and Ross (2001). Learners, they say, need to know what their own learning style in order to manage their learning more effectively and efficiently. In addition, they stressed that educators need to be aware of the learning styles of their students so that they can establish alternate ways of teaching to learners with differing styles.

Research Methods

This study was descriptive in nature employing the survey-correlational approach. It attempted to determine the learning modes of 123 randomly selected Master of Business Administration (MBA) students of Universiti Utara Malaysia (UUM), a leading management university located in the northern peninsula of Malaysia. At present, the MBA students post the highest number in the Graduate School of UUM and areas of research thus abound, such as that on learning styles. This area of investigation is not yet fully explored in UUM Graduate School, thus, this study.

A Personal Learning Style Inventory devised and validated by Wyman (1999) of the Center for New Discoveries in Learning, California, U.S.A. was utilized in this study. This was a 36-item research tool that assessed students' learning styles across three modes: visual (picture style), kinesthetic (physical state), and auditory (hearing style). Scoring is relatively easy because it is well structured and the language used is simple. In fact, scoring in this study was done and facilitated through an automated computer analysis after access to the website of the Center. Despite its ease in administration, however, it was pilot-tested to determine its applicability in the local context. A Cronbach alpha of 0.903 confirmed its appropriateness for use in the Malaysian context.

Data were gathered personally by the researchers in Sintok and Sungai Petani centers within a span of one month. Analyses of data were done using the SPSS computer software at 0.05 level of significnce.

Findings

Learning Modes of the Respondents

The data in Table 1 show that more than one-third (34.1%) of the respondents tended to be kinesthetic learners. Wyman (1999) clearly expounds that these are the type of students who prefer to assimilate knowledge through their body or feelings. It is explained that if they can touch and feel whatever they are learning about, these learners will process and remember the information effectively. The findings also indicate about one-third (26%) of the respondents had preference for "auditory" learning mode. Students with this learning style learn best by hearing or listening, implying that they do

not necessarily make pictures in their minds, as do the visual learners, but rather filter

incoming bits of information through their listening and repeating skills (Wyman, 1999).

Apparently, the findings also revealed a few respondents (19%) projecting

bimodal learning styles, indicating that they have tendencies to acquire information and

organize understanding in two ways. This is an interesting piece of information as it

points out the notion that individuals learn to adapt to the learning environment as they

assimilate knowledge.

Table 1

Learning Modes of the Respondents as a Whole

Learning Modes	Frequency	Percentage
Audio (A)	32	26.0
Kinesthetic (K)	42	34.1
Visual (V)	20	16.3
Kinesthetic-Audio (KA)	8	6.5
Visual-Audio (VA)	10	8.1
Visual-Kinesthetic (VK)	5	4.1
Visual-Kinesthetic-Audio (VKA)	6	4.9
Total	*123*	*100*

Only six (4.9%) of the respondents demonstrated multi-modal learning modes. As

the name implies, this learning style involves acquisition of ideas in various preferences.

In this study, however, these learning modes are described as "visual," "kinesthetic," and "auditory" styles.

Differences in Learning Modes

Across the independent variables, it can be seen in Table 2 that in terms of gender, the male respondents (42.7%) tended to be kinesthetic learners. Some, however, showed visual learning mode (18.7%) and auditory learning style (17.3%). A few others indicated bimodal (16%) and polymodal (5.3%) styles. On the other hand, more than one-third (39.6%) of the female respondents displayed an auditory learning style, and 21 percent showing kinesthetic learning mode. Bimodal and polymodal modes are also observed, although not substantially represented.

When the chi-square test was applied, it was found out that significant differences occurred in the respondents' learning modes according to gender. This is evidenced by the chi-square value of 15.22 and a p-value of 0.019, significant at the 0.05 alpha. The null hypothesis that there is no significant difference in the learning style of respondents when grouped by gender is therefore rejected.

In terms of marital status, more than one-third (37.3%) of the married respondents were kinesthetic learners, and close to one-fourth (22%) were visual learners. Fifteen percent displayed auditory learning approach, 20 percent as having bimodal styles, and only 5.1% with multiple learning modes. Only a few of the unmarried respondents also

demonstrated bimodal learning modes (between 5.1% and 8.5%) as well as multiple learning approaches (5.1%).

The data in Table 2 reveal that more than a quarter of the unmarried respondents were audio learners (35.9%) and kinesthetic learners (31.3%). The similar proportion perhaps indicates that the unmarried respondents had a propensity to be "auditory" in some learning situations and "kinesthetic" in other learning environments. Between 3.1 percent and 9.4 percent were bimodal learners, and 4.7 percent as multi-modal learners.

When the chi-square analysis was done, however, no significant differences were found in the learning styles of respondents categorized according to their marital status ($p > .05$), indicating that whether respondents were married or unmarried, learning styles would not significantly vary. Hence, the null hypothesis that there is no significant difference in the learning styles of respondents grouped according to marital status is accepted.

When grouped by breadwinning status, those with dependents tended to have kinesthetic (37.7%) learning mode, and those with no dependents projected auditory (37%) learning preference. A good proportion of those with dependents had auditory (19.5%) and visual (16.9%) learning modes.

Table 2

Learning Modes of the Respondents Across Independent Variables

Independent Variables	Learning Modes						
	A	K	V	KA	VA	VK	VKA
Gender *							
Male	13 (17.3%)	32 (42.7%)	14 (18.7%)	5 (6.7%)	3 (4.0%)	4 (5.3%)	4 (5.3%)
Female	19 (39.6%)	10 (20.8%)	6 (12.5%)	3 (6.3%)	7 (14.6%)	1 (2.1%)	2 (4.2%)
Marital Status [ns]							
Married	9 (15.3%)	22 (37.3%)	13 (22.0%)	5 (8.5%)	4 (6.8%)	3 (5.1%)	3 (5.1%)
Single	23 (35.9%)	20 (31.3%)	7 (10.9%)	3 (4.7%)	6 (9.4%)	2 (3.1%)	3 (4.7%)
Breadwinning Status [ns]							
With dependent	15 (19.5%)	29 (37.7%)	13 (16.9%)	5 (6.5%)	8 (10.4%)	3 (3.9%)	4 (5.2%)
With no dependent	17 (37.0%)	13 (28.3%)	7 (15.2%)	3 (6.5%)	2 (4.3%)	2 (4.3%)	2 (4.3%)
Academic Status [ns]							
Full-time	16 (44.4%)	11 (30.6%)	3 (8.3%)	2 (5.6%)	1 (2.8%)	1 (2.8%)	2 (5.6%)
Part-time	16 (18.6%)	31 (36.0%)	16 (18.6%)	6 (7.0%)	9 (10.5%)	4 (4.7%)	4 (4.7%)
Race [ns]							
Malay	12 (24.0%)	17 (34.0%)	11 (22.0%)	3 (6.0%)	2 (4.0%)	2 (4.0%)	3 (6.0%)
Chinese	18 (28.1%)	22 (34.4%)	7 (10.9%)	5 (7.8%)	7 (10.9%)	3 (4.7%)	2 (3.1%)
Indian	2 (28.6%)	3 (42.9%)	1 (14.3%)	0	1 (50.0%)	0	1 (14.3%)
Others	0	0	1	0			0

			(50.0%)				
Age [ns]							
Below 30 years	22 (31.9%)	22 (31.9%)	7 (10.1%)	4 (5.8%)	8 (11.6%)	3 (4.3%)	3 (4.3%)
30 to below 35 yrs	6 (21.4%)	9 (32.1%)	8 (28.6%)	3 (10.7%)	0	2 (7.1%)	0
35 to below 40 yrs	2 (15.4%)	8 (61.5%)	1 (7.7%)	0	1 (7.7%)	0	1 (7.7%)
40 years and above	2 (15.4%)	3 (23.1%)	4 (30.8%)	1 (7.7%)	1 (7.7%)		2 (15.4%)
Work Experience [ns]							
None	11 (45.8%)	8 (33.3%)	2 (8.3%)	0	1 (4.2%)	1 (4.2%)	1 (4.2%)
Less than 5 years	13 (31.0%)	13 (31.0%)	4 (9.5%)	3 (7.1%)	5 (11.9%)	2 (4.8%)	2 (4.8%)
5 to less than 10 yrs	2 (7.4%)	11 (40.7%)	8 (29.6%)	3 (11.1%)	2 (7.4%)	1 (3.7%)	0
10 years and above	6 (20.0%)	10 (33.3%)	6 (20.0%)	2 (6.7%)	2 (6.7%)	1 (3.3%)	3 (10.0%)
Position [ns]							
Top/Executive	4 (16.0%)	8 (32.0%)	5 (20.0%)	2 (8.0%)	4 (16.0%)	1 (4.0%)	1 (4.0%)
Middle/Supervisory	11 (18.6%)	22 (37.3%)	12 (20.3%)	4 (6.8%)	5 (8.5%)	3 (5.1%)	2 (3.4%)
None	4 (40.0%)	4 (40.0%)	0	1 (10.0%)	0	0	1 (10.0%)
Not applicable	13 (44.8%)	8 (27.6%)	3 (10.3%)	1 (3.4%)	1 (3.4%)	1 (3.4%)	2 (6.9%)
Subject Load [ns]							
3 units/credits	2 (20.0%)	1 (10.0%)	4 (40.0%)	1 (10.0%)	1 (10.0%)	0	1 (10.0%)
6 units/credits						2 (4.9%)	

9 units/credits	6	16	8	2 (4.9%)	4 (9.8%)	1 (2.1%)	3
12 units/credits	(14.6%)	(39.0%)	(19.5%)	4 (8.5%)	4 (8.5%)	1 (6.3%)	(7.3%)
15 units/credits	14	17	6	0	0	1	1
	(29.8%)	(36.2%)	(12.8%)	1	1	(11.1%)	(2.1%)
	5	7	2	(11.1%)	(11.1%)		1
	(31.3%)	(43.8%)	(12.5%)				(6.3%)
	5	1	0				0
	(55.6%)	(11.1%)					

* *Significant differences at .05 alpha (Corrected χ^2 = 15.22, df = 6, p = .019)*

[ns] *No significant differences (p > .05)*

A combined percentage of about 20 percent indicates those with dependents who were bimodal learners, and only 5.2 percent as multi-modal learners. Likewise, only 4.3 percent of those with no dependents had multiple learning styles, and between 4.3–6.5 percent with bimodal learning styles. Close to one-third of those with no dependents were kinesthetic learners (28.3%) and 15 percent as visual learners. On the whole, there were no significant differences in the learning styles of respondents grouped by breadwinning status, as evidenced by the p-value of greater than 0.05. This finding led to the acceptance of the null hypothesis that there is no significant difference in the learning styles of respondents classified according to breadwinning status.

As regards academic status, substantial proportions of full-time MBA students (44.4%) were auditory learners and a quarter (30.6%) of them, as kinesthetic learners. Eight percent were visual learners, and between 2.8 percent and 5.6 percent were bimodal learners. Only 5.6 percent of the full-time students tended to have multiple learning styles. Among the part-time students, more than one-third (36%) of them were

kinesthetic learners, with a combined total of 37 percent (18.6% for each category) of those having auditory and visual learning modes. Between 4.7 percent and 10.5 percent indicated bimodal learning styles, and only 4.7 percent were multi-modal learners. The chi-square analysis revealed no significant differences in the learning styles of the respondents grouped by academic status ($p > 0.05$), thus, accepting the null hypothesis that there is no significant difference in learning styles of respondents categorized according to academic status.

With respect to race, the Malays (34%), Chinese (34.4%), and Indian (42.9%) respondents tended to be kinesthetic in their learning approaches. A close second for the three groups is that of auditory learning mode (between 24 and 29 percent), followed by the visual learning preference (between 11 and 22 percent). Those with bimodal learning styles were only between 4 and 11 percent of the total sample for each group. Not many of the samples had multi-modal learning approach. Those in the "others" category (non-Malaysians) were either visual (50%) or visual-auditory (50%) learners. The chi-square analyses, however, disclosed that there were no significant differences in the learning styles of respondents when grouped by race, as supported by a p-value of higher than 0.05. This finding led to the acceptance of the null hypothesis that there is no significant difference in the respondents' learning styles when classified according to race.

In terms of age, those below 30 years were either auditory learners (31.9%) or kinesthetic learners (31.9%). Those between 30 and below 35 years (32.1%) tended to be kinesthetic learners, while majority (61.5%) of those between 35 and below 40 years

projected kinesthetic learning mode. Those 40 years and above (30.8%) displayed visual learning style. Other learning approaches were also observed in the findings, but they are not well represented across various groups of bimodal and multi-modal learning modes. However, significant differences in learning styles across age groups were not noted, as supported by the p-value of greater than 0.05. The null hypothesis that there is no significant difference in the learning modes of respondents grouped by age is thus accepted.

With regard to work experience, those with no work experience were reported to have auditory learning mode (45.8%), while those with less than five years of work experience were either auditory (31%) or kinesthetic (31%) learners. Moreover, the data in Table 2 show that those with at least five (5) years of work experience tended to be kinesthetic learners. A combination of various learning modes is also shown in the data. It was also confirmed after the chi-square test that there are no significant differences in the learning modes of respondents by work experience (p > 0.05). The null hypothesis that that there is no significant difference in the respondents' learning modes is therefore accepted.

Across position in the company, those holding top/executive (32%) and middle/supervisory (37.3%) positions seemed to be kinesthetic learners, while those with no position in the firm were either auditory or kinesthetic learners (40% for each category). Moreover, those under the "not applicable" category (not working) tended to be auditory learners (44.8%). Other respondents also displayed two or three modes of

learning. The chi-square analysis indicated no significant differences in learning modes of respondents grouped by company position (p > 0.05). This finding led to the acceptance of the null hypothesis that there is no significant difference in the learning modes of respondents when categorized according to position in the firm.

As regards subject load, the data in Table 2 reflect that more than half (55.6%) of those who have earned 15 units/credits displayed auditory learning style. Those who have obtained 3 units/credits (40%) tended to be visual learners, and those who have finished between 6 and 12 units/credits prefer a kinesthetic learning approach. Bimodal and multi-modal learning approaches were also projected by the respondents, although the proportion is not substantially represented compared to uni-modal learning styles like auditory, kinesthetic, or visual. The chi-square test disclosed no significant differences in the learning styles of respondents grouped by subject load, as evidenced by a p-value of greater than 0.05. Thus, the null hypothesis that there is no significant difference in respondents' learning styles when categorized according to subject load is accepted.

Correlates of Learning Modes

With learning mode as the dependent variable and gender, marital status, breadwinning status, academic status, race, age, work experience, position in the company, and subject load as the independent variables, lambda tests were employed to determine the relationships of the dependent variable with the independent variables.

As presented in Table 3, except for subject load, there are no significant relationships between learning modes and gender ($p = 0.091$), marital status ($p = .647$), breadwinning status ($p = 0.464$), academic status ($p = 0.254$), race ($p = 0.315$), age ($p = 0.889$), work experience ($p = 0.654$), and position in the company ($p = 0.351$). The p-values generated from the analyses were not significant at the 0.05 level of significance. This finding led to the acceptance of the null hypothesis that there are no significant relationships between learning mode and the independent variables mentioned.

Table 3

Relationships of Independent Variables to Learning Modes of the Respondents

Independent Variables	Dependent Variable: Learning Modes		
	Lambda	Two-tailed Significance at .05 alpha	Statistical Decision
Gender	.111	.091	Not significant
Marital Status	.037	.647	Not significant
Breadwinning Status	.049	.464	Not significant
Academic Status	.074	.254	Not significant
Race	.012	.315	Not significant
Age	.012	.889	Not significant
Work Experience	.037	.654	Not significant
Position in the Company	.062	.351	Not significant
Subject Load	.086	.032	Significant

The independent variable subject load (p = 0.032) yielded a significant relationship with learning mode, indicating that learning approaches vary depending on the credits or units the respondents were having in their academic studies at the time of this study. It may also be said with 95% confidence level that subject load influences the tendencies of the MBA students to be audio, kinesthetic, visual, or a combination of these styles.

Implications and Recommendations

The findings of this study imply that the MBA students of UUM who participated in the research tend to process and assimilate information through "touch." As explained by Wyman (1999), kinesthetic learners have a more difficult time demonstrating what they know in a traditional lecture room. A sense of time is also quite difficult for this type of learners. Often, there is little projection of consequences of actions because these learners do not "see" out into the future; they only understand the present moment. The expert further explains that kinesthetic learners will excel in academic settings where learning tasks can be "acted out" and can choose assignments that allow them to build projects, or any work involving the body and movement.

Vincent and Ross (2001) describe kinesthetic or tactile students as poor listeners, those who learn by doing, express emotions physically, and have an outgoing personality. They learn effectively by engaging in hands-on activities. With these characteristics, these authorities suggest that implications of having kinesthetic learners include provision of varied activities that allow students to participate in learning, physical

movement within the lecture room, and notes-taking. If possible, it is highly recommended that these students be encouraged and guided to learn by writing notes to help remember concepts, taking notes during lectures and discussions, determining important information in the textbook, and building projects to help explain ideas.

The above authors also suggest some general guidelines related to effective learning processes such as the following: Lecturers should know the material well before beginning to teach; they should always begin with "attention grabbers" and motivate learners by introducing new subject matter in view of its future relevance to them; they should use audiovisuals, multimedia, and activities that allow student participation; and, complex tasks should be divided into smaller, achievable learning units so that the work is not overwhelming.

Across the independent variables in the present research, significant differences in learning modes were found in terms of gender. The male respondents preferred the kinesthetic mode, and the female respondents preferred the auditory mode. This finding suggests that the males have a propensity to be more tactile than the females, while the females tend to be more imaginative in acquiring and assimilating information compared to their male counterparts. In his investigation of Swedish students, Heffler (2001) also noted a significant gender difference in the concrete experience learning mode, with females scoring higher. The result of the present study also lends support to the finding of a U.K-based project (Mumford, 1995) that found gender differences in learning channels of the students surveyed. In this study, however, it was found out that the female students

were more dependent on visual strategies, and less dependent on kinesthetic strategies than the males.

According to Vincent and Ross (2001), visual learners (in the present study, the female MBA students) have vivid imaginations, are quiet by nature, and find verbal instructions difficult. They prefer the visual sense, must see to understand better, and learn best by reading and watching. These authors recommend that visual learners can be dealt with effectively by providing as many visual clues as possible, using view equipment, providing assignments in writing, and using charts and pictures. Nevertheless, Sadler-Smith (1996) pointed out that differences between learners in terms of their learning styles are important in the learning process and are therefore of considerable relevance to the academic community.

When the relationships of the independent variables with the learning modes were ascertained, only subject load yielded a positive and significant association. It may be inferred that the number of credit hours the students were carrying for the semester substantially influenced learning modes. In other words, learning modes may tend to change or be modified depending on the academic loads taken by the respondents. Briggs (2000), is of the opinion though, that it is difficult to generalize about course groups, even when they are aggregated. Apparently, the researchers of the present study acknowledge that the results of the research are applicable only to the respondents who participated, and not to be generalized in their entirety in the wider learning context.

For further research, it is recommended that other investigations be conducted involving other variables not included in this study which might have bearing on learning modes. For instance, how learning modes might correlate with teaching styles might be an interesting research agendum.

Scope and Delimitation of the Study

Learning mode in the study was deemed to be synonymous with learning style, learning preference, and learning approach, all of which were construed to denote an individual's propensity to choose or express a liking for a particular learning technique of combination of techniques (Sadler-Smith, 1996). There may be other ways of categorizing learning modes, but Wyman's (1999) definitions (visual, kinesthetic, auditory) were utilized in this study. The findings apply only to the MBA students sampled in Sintok and Sungai Petani centers.

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TECHNOLOGICAL LITERACY BEHAVIOUR AMONG TRAINEE-TEACHERS: ISSUES AND CHALLENGES

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Abstract

Electronic and digital revolution have inundated today's world with new knowledge and technologies, extending the concept of literacy beyond the traditional boundaries of reading and writing of the print text. These developments have posed new demands on the education system and the teachers. For instance, new strategies such as computer-based learning together with the many new teaching tools provided by the multimedia technology need to be utilised in the process of learning and teaching. Thus, teachers' technological literacy behaviour, i.e. being adequately exposed and well informed of the use of these multiple forms of communication, will determine their efficacy to utilise the new technologies fruitfully in their classrooms. Therefore, it is essential that a cadre of teachers developed in mind and person with new skills for the effective use of the new information technologies be trained. Since the task of training teachers has traditionally been the responsibility of the many Malaysian teacher-training colleges a study by way of survey was conducted recently among 200 trainee-teachers in four teacher-training colleges in northern Malaysia. The study examined the technological literacy behaviour of the trainee-teachers, which includes the trainee-teachers' exposure, usage, view and acceptance of ICT. This paper reports the findings of the survey as well as highlights strategies for the effective application of ICT to promote quality education in the Malaysian classroom.

Introduction

Digital revolution has profoundly transformed people's lives. 'People are being increasingly surrounded by computers, CD-Roms, internet, cellular phones, cable and satellite television, videodiscs, video-conferencing, online newspaper, digital radios and other wireless and fibre optic technologies' (Ambigapathy, 2001). The widespread influence of ICT in the present era has posed new demands not only to individuals but to corporations and countries. In an era where knowledge economy and e-commerce have become the new sources for future wealth, countries without these technological capabilities are certain to lag behind economically. Realising this fact Governments and business corporations are taking serious actions to put their countries and industries in the right track to confront the demands of the information era. In this connection, the Malaysian Government has proposed a masterplan that outlines the information and communication technology (ICT) direction of all agencies and departments (8th Malaysian Plan, 2001-2005). The success of such a masterplan entails the creation of a knowledge-based workforce.

Clearly, the development of such a dynamic and informed workforce will involve the education system and the teachers because education plays a crucial role in developing a nation's human resource (Government of Guyana, 1996). As such, educational bodies and learning institutions need to be equipped with the relevant 'mechanism' to produce such a workforce. Teachers, being an important part of this 'mechanism' will therefore need to be proficient ICT practitioners. In other words, teachers need to be developed in mind and person with new skills for the effective use of the new technologies of this information era. Moreover, studies have shown that teachers have immense influence on

their students (Palmberg R., 1998; Gonzales F., 1998; Linda D.H., 1999). Beyond imparting knowledge to their students, teachers also get to transmit their own literacy behaviour and practices onto their students (Ambigapathy and Sachithanantham 2001). Thus, teachers' technological literacy behaviour (i.e. teachers' ICT knowledge and practices) will have a profound impact on their students' technological literacy behaviour. It is therefore imperative that would-be teachers develop in them excellent technological literacy behaviour.

Related Literature

The role of the teachers has remained an essential and integral part of the teaching and learning process. As such, it is not surprising to find that teachers have significant influence on their students'

literacy behaviour and habits. In fact studies have produced empirical evidence which indicate that teacher variables affect student behavioural and attitudinal outcomes. For instance, Palmberg (1998), who studied forty, second language students in Gibo Akademic University in Vasa, Finland found that the students initial negative opinion of their course became positive at the end of the course. Palmberg (1998) accounts this change in opinion to the influence of the course teachers' own attitude and opinion towards the course. Similarly, Jeremy Pagram(2001) who investigated the use of laptop computer for upper primary school children who had learning difficulties, reports that teachers' attitude to, and, familiarity with computers was reflected in the students' productive use of the technology and attitude to it.

In fact, it is not uncommon for students to imitate their teachers and follow their examples (Nuttall, 1996). In short students perceive their teachers as their role models. 'The teacher does not only teach the course but also himself. And, what he (the teacher) is, is usually learned much better by the students than any other content he ever tries to get across' (Wardhaugh, 1992). Considering the immense influence that teachers have on their students and that education is the basis of human resource development (The Government of Guyana, 1996) clearly a well-trained and qualified cadre of teachers is crucial for the prosperity of a nation.

On this premise, this study examines the technological literacy behaviour of today's trainee-teachers who would be tomorrow's practising teachers. The study examines the technological literacy behaviour of the trainee-teachers, which includes the trainee-teachers' exposure, usage, view and acceptance of ICT.

Research Design:

Subjects

Two hundred and one trainee-teachers from four teacher-training colleges in northern Malaysia were invited to participate in this study. The participants comprised of 48 males and 153 females. Figure 1 reflects this trainee ratio in percentages via a piegraph.
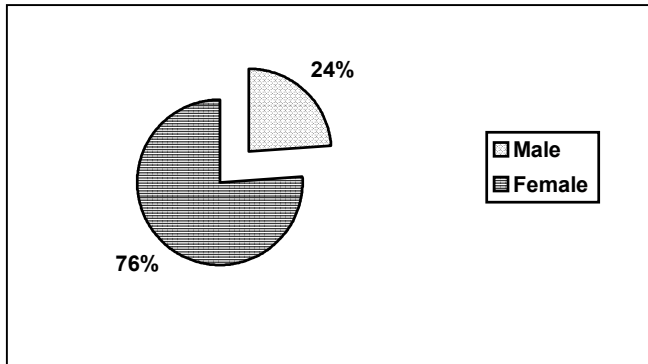
Figure 1: Gender Composition of Sample Population

Their ages range from twenty to thirty one and all of them have passed the SPM examination (a major government examination for the form five students in Malaysia) which is equivalent to the 'O' levels.

In terms of ethnicity, there were 146 Malays, 45 Indians and 10 Chinese. Their ratio is reflected in the figure below. (See Figure 2).
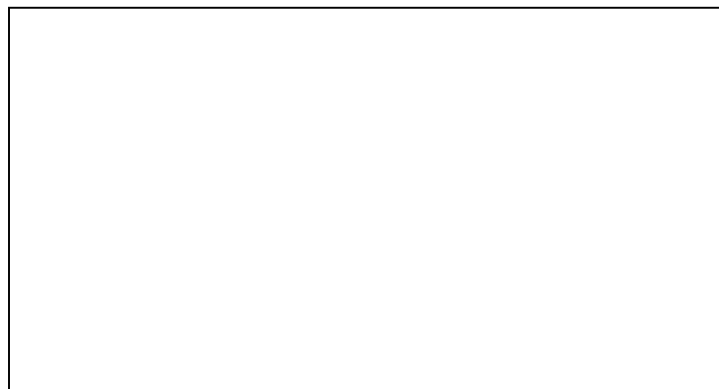
Figure 2: Ethnic Composition of Sample Population

Instrument

The instrument used in this study is a questionnaire, which consists two sections. Section 'A' solicits selected personal background factors of the subjects while Section 'B' comprises fourteen open-ended questions enquiring information on the trainee-teachers' exposure, usage, view and acceptance of ICT.

Data Analysis

The participants technological literacy behaviour is analysed using descriptive statistics. Percentages and frequencies of their responses to the fourteen open-ended questions related to their exposure, usage, view and acceptance of ICT are calculated to describe the trainees' technological literacy behaviour.

Findings

(i) Trainee-teachers' Exposure to Computer

The question, at what age were they exposed to computer derived the following responses. (See Table 1).

Age	Participants	Percentage
Below 12 years	46	22..9
13 – 15 years	82	40.8
16 –18 years	37	18.4
19 years and above	35	17.4
None	1	0.5
Total	201	100

Table 1 : Trainees' Age of Exposure to Computers

It was found that almost every participant (except for one) was exposed to the use of computers before 19 years old i.e. before coming to college (See Table 1). In fact more than sixty percent seem to have used the computer by 15 years old. Therefore, it is clear that the trainee-teachers have been exposed to computers for about 5 years. As for the place of exposure, the trainees' responses are as presented in Table 2 below.

Places	Participants	Percentage
Home	37	18.0
School	110	55.0
Other places	30	15.0
Home and school	19	10.0
Home and other places	1	0.5
School and other places	2	1.0
None	1	0.5
Total	201	100

Table 2: Trainee-teachers' Place of Exposure to Computer

It was found that fifty-five percent of the trainees got exposure to computer and computer-based activities through their respective schools. On the other hand, eighteen percent of the trainees seem to have got their exposure to computers in their homes while fifteen percent of them had indicated 'other places' as their answer. These other places could be cybercafes and so on. But the point to note is that it is generally the schools that had played a major role in educating people in the use of computers.

(ii) Trainee teachers' Usage of the Computer

The number of hours that the participants used the computer in a week is shown in Table 3.

Hours	Participants	Percentage
Less than 5 hours	51	25.4
6 – 10 hours	97	48.3
11 – 15 hours	25	12.4
More than 15 hours	28	13.9
Total	201	100

Table 3: Duration of Trainees' Use of Computer in a Week

From Table 3, it can be gathered that more than 75% of the participants use the computer for at least six hours a week which amounts to almost an hour a day. Assuming that the trainees finish nearly ten hours a day for their curriculum and co-curriculum activities and spend about seven hours a day for rest and sleep, an hour a day spent on computer activities is encouraging.

On the question of the standard of their computer skills, ninety-nine of the participants indicated that they were good (able to use two or more programmes such as words, excel etc, as well as surf the net using more than two such engines) and seventy-three of them indicated that they were fair (able to use the computer only for typing and saving documents, also able to open and close the documents. Meanwhile, twenty of the participants felt that their computer skills were not good (need assistance even to switch-

on and switch-off the computer, while nine of them indicated that they were very good (able to use most of the programmes in the computer such as,Word, Excel, Powerpoint and Access, as well as use the internet for multiple purposes, for e.g. e-mail, chatt, surf the websites for relevant materials, etc., able to create own websites and so on. (See Figure 3)
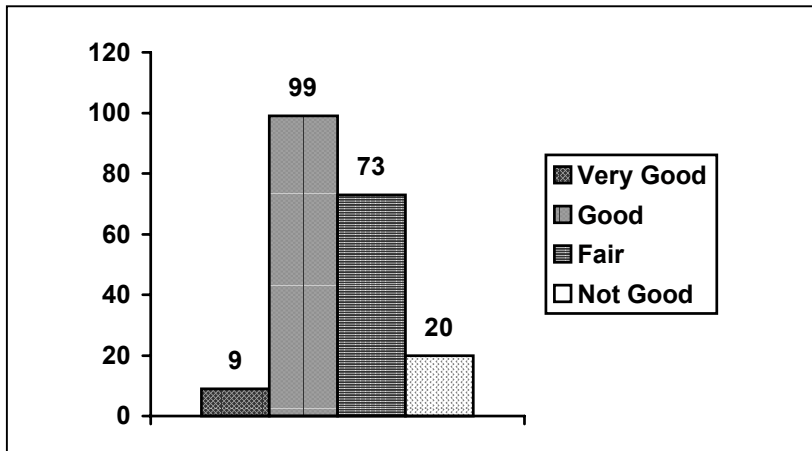
Figure 3: Trainees' Level of Computer Skills

When the trainees were asked to indicate the places where they use their computers, the following responses were obtained.

Places	Participants	Percentage
Home	45	22
Cybercafe	18	9
Hostel	5	2.5
IT Lab	6	3

Home+Cybercafe+IT Lab	24	12
Cybercafe+IT Lab	14	7
Home+Cybercafe+Hostel+ IT Lab	22	11
Home+IT Lab	6	3
Home+Cybercafe+Hostel	14	7
Home+Cybercafe	14	7
Cybercafe+Other pkaces	2	1
Cybercafe +Hostel	5	2.5
Home+Hostel	8	4
Home+Cybercafe+Hostel+IT Lab+ Otherplaces	2	1
Hostel+IT Lab	2	1
Cybercafe+Hostel+ITLab	7	3.5
Home+Hostel+IT Lab	4	2
Cybercafe+Other Places+IT Lab	1	0.5
Other places	1	0.5
Home+Hostel+Other Places	1	0.5
Total	201	100

Table 4: Places Where Trainees Use the Computers

Table 4 clearly shows that the trainee-teachers used their computers more in their homes (22%). The next most popular place is the cybercafe (9%). Whereas, only 2.5% and 3% of the trainees use computers in the college hostel and the college IT Lab, respectively. Though more participants are found to use a combination of these places, it is justifiable to say that the trainee-teachers seldom used the computers in a learning environment.

However, it is even more disappointing to find that hundred and eighty-eight of the participants do not use the computer for any reference work. Only thirteen of them used

the computer for such academic purposes. In other words, only seven percent of the trainees used the computer for academic activities. (See Figure 4).
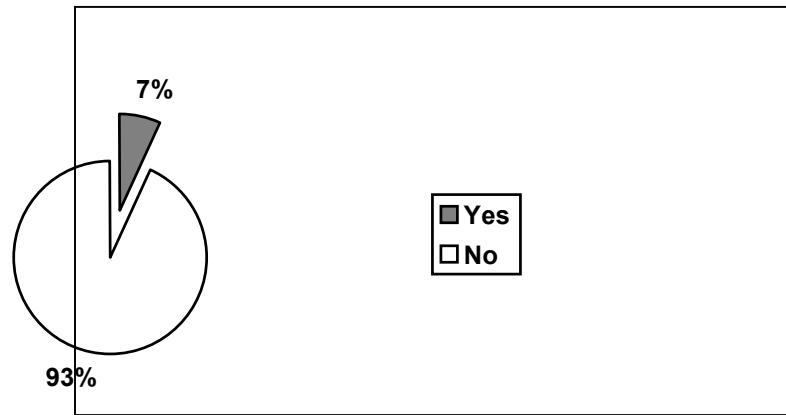
Figure 4 : Trainees' Use of the Computer for Reference-purpose

In fact, it was found that eighty percent of the trainee-teachers use the computer to surf the internet, to e-mail and for chatting purposes. Thirty-two percent of them indicated that they used the computer to type their assignments. Meanwhile only six percent of them indicated that they used the computer for enriching their knowledge. And, only two percent used the computer for referencing. (See Table 5)

Purpose of Using the Computer	Percentage
Typing Assignment	32
Knowledge	6
Reference	2
Internet/e-mail/chatt	80

Table 5 : Trainees' Purpose of Using the Computer

Among the common computer programmes used by the trainee-teachers, winword topped the list (97.8 %). Next in the list is the internet (16%) – where Yahoo, Googles and MSN (in that order) were the search engines popularly used by the trainee-teachers. While excel was used by 14.7% of the trainees, only 6.2 % used the power-point. Clearly the trainee-teachers need in-depth training in the use of ICT for academic purposes.

(iii) Trainee-teachers' view and acceptance of ICT

Having examined the trainee-teachers' exposure and usage of computer, their views and acceptance of ICT need to be studied next, to understand clearly their technological literacy behaviour. Towards that end, the trainee-teachers were asked whether they agreed that using computers was beneficial to them. All the participants answered this question in the affirmative. This is clear indication that the trainee-teachers are well aware of the importance and essentiality of computers in education in the information era. On the same note, the trainees were asked if they would encourage and promote the use of computers among their pupils. And their responses to this question are presented in Figure 5 below.
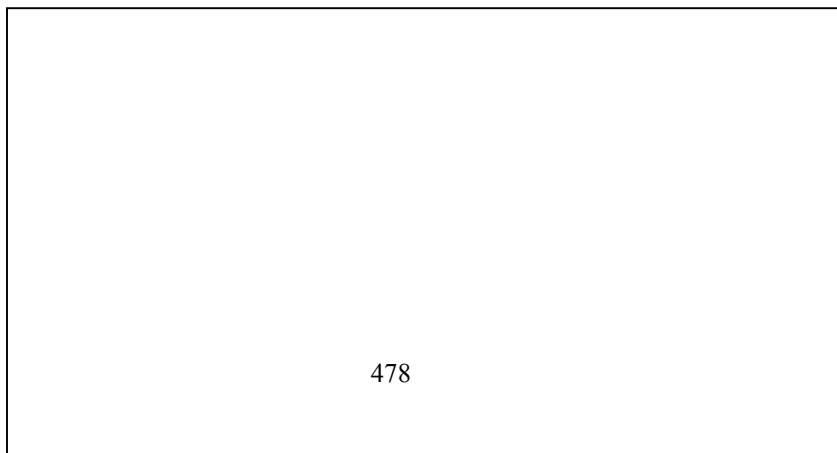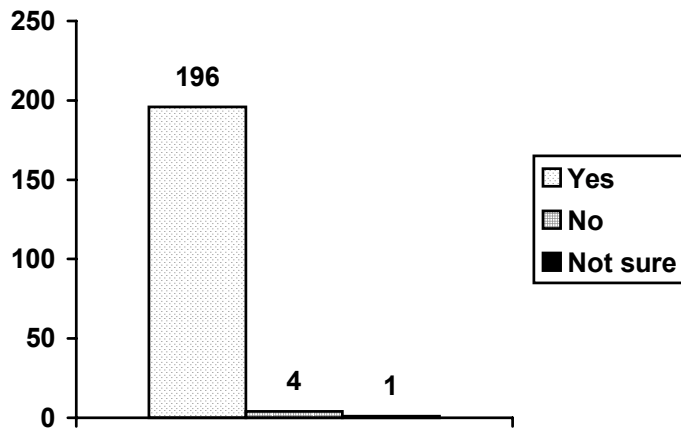
Figure 5 : 'Will You Encourage and Promote the Use of Computers Among Your Pupils?'

Hundred and ninety-six (97.5%) of the participants said that they will encourage and promote the use of computers among their pupils. Only four participants said they wouldn't do so while one of them indicated that he was not sure. While there may be many reasons for their negative answers, the number of participants in this category is too negligible for special attention. It is more important to note that more than ninety-seven percent of the trainees are in favour of ICT in education. Such a positive attitude is essential for success in education

Summary of Findings

The findings of this study reveal that trainee-teachers:

1. have adequate knowledge and exposure in ICT especially in the use of computers.

2. have positive attitudes (views and acceptance) of ICT in education.

3. lack in using computers for the academic activities, such as using computers for referencing and exploiting the web for learning purposes.

Conclusion

Based on the above findings, it can be concluded that the majority of the trainee-teachers have early exposure to computers, a reasonable length of time of indulgence in computer activities (i.e. almost one hour a day) and an acceptable level of computer skills. However, the participants limited usage of the computers at academic places such as the college IT Lab (see Table 4) and the small number among the trainees using the computers for academic activities (see Table 5) such as referencing and research, do not speak well for their technological literacy behaviour.

Clearly, then, there is an urgent need to promote these essential literacy practices (i.e. referencing and researching using information and communication technologies) among the trainee-teachers. The trainees need to be taught to use the information technologies for a more fruitful and effective purpose rather than for past time and entertainment purposes. For that, they need to be trained to treat information and communication technologies as a tool to source knowledge and information.

 Teacher-training colleges should provide better facilities and more opportunities to trainee-teachers to develop their skills and knowledge on ICT. The trainees should be made aware of the importance of ICT as a potent force for change in the 21st century. As such, the training programmes in teacher-training colleges in Malaysia need to be re-

examined and re-structured to keep abreast with the rapid development in information and communication technologies. Considering that Malaysia is gearing towards creating a knowledge-based society, teachers, as builders of the society, need to be both IT savvy and ICT proficient.

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ADAPTIVE INTELLIGENT TUTORING SYSTEM FOR AUTHORING AND LEARNING SCIENCE ON WEB.

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Abstract

Adaptive Intelligent Tutoring System is one of the new innovation in education area. By using the Internet as the delivery medium, the system can be accessed by all students wherever they are. They can learn the subject on their own without the assistance of the human tutor. The adaptive ITS will replace the role of human teacher. The system observes student's actions and adapts to their knowledge and learning abilities. The learning material will be provided to students according to their performance. This paper will discussed the relations of student's learning style and the performance of the Adaptive Intelligent Tutoring System, and types of learning material or content that will be presented to the students. Issues on how teachers can author or contribute the subject contents into the intelligent system will be discussed. Finally, the paper will present the components and the integration of technology in the system together with its architecture.

1. Introduction

Intelligent Tutoring System on the Internet is a system that gives a lot of benefits from the teaching and learning point of view. Term that always been used for an ITS on Web is Adaptive Hypermedia System (Brusilovsky, 2000). The main feature of the system is its adaptivity, so the system can be developed according to what the content should be adapted according to student's performance, cognitive ability, learning styles, family background, culture and other traits. Most of the existing AHS uses student performance as a reference (by answering questions, taking tests or by links that they

have visited) to address appropriate content of the subject to the student. Students who are weak (from test that they have taken after every topic) and are not ready to continue to the next topic will be addressed with other explanations which suit her level of understanding, while students whose level of understanding is high will continue to the next topic of the subject. So, each student will learn with own capability and will no longer left behind that usually happen in most classes.

There are a lot of advantages when using Internet as a learning environment medium for AHS. For examples the hypertext capability, multimedia content delivery and client/server architecture that made the system suitable for individualised learning and support multi-user at the same time. Hence, AHS can be developed according to students or teacher's preference and needs so that the teaching and learning process will be more efficient. For example, SIETTE system (A. Rios et.al, 1999), where teacher can author questions according to topics which has its parameter whether it's complicated, medium or easy. Students who use this system will answer these questions and their performance will be determined by the questions that they have answered.

While in the other hand, teacher must play their role in content development in AHS. Even though teacher does not involved directly in the development of the system from scratch, but they should contribute their knowledge and teaching strategy in the system because they are closer to students and know their needs or problems. Hence, a prototype AHS system will be developed that allow teacher to author subject content and student will learn better via this system.

2. Learning Styles

Every student has different learning styles. Learning style is how students will preferentially concentrate to certain information, process it and retain the perceived information whether it is easy or hard. It is a choice whether the student will retain the information by listening, look, read, write, by illustrations, oral or by experiences, or combinations from one or more of these criterias.

Student's performances in their study depend a lot on how they learn. In most classes, teachers do not bother about student's learning style. Each student perceived and understands each subject in different level. In class, there are fast learners and slow learners. Teacher can't concentrate to each and every student because they have to finish the syllabus on time. Media that teacher always use in class are also limited. Teacher only give explanation, show static pictures and diagrams and address the same questions to students. So students (slow learners) who need more explanations and attentions will be left behind. To make sure that no students are left behind in class is to implement teaching strategy in AHS so that students can learn via the system according to their capability and learning styles.

2.1 Types of Learning Style

Every student has different learning styles. Some students prefer information in the form of facts, data and algorithm; while others are more comfortable with theories and mathematical model. There are students who understand the subject by visual material such as pictures, diagrams, and schematics, and some of them prefer oral and written

explanations. While others like to learn actively in groups and interactively; others prefer to study alone.

Students who match the learning style that was addressed in class by their teachers tend to retain the information longer, used the information effectively, and have deeper interest in Science subject than other students (R.M. Felder, 1993).

Felder and Silverman have formulated a learning style that is relevant to Science subject. The Felder-Silverman Learning Style Model classifies students to five dichotomous dimensions. There are:

1) *Sensing Learners / Intuitive Learners*

2) *Visual Learners / Verbal Learners*

3) *Inductive Learners / Deductive Learners*

4) *Active Learners / Reflective Learners*

5) *Sequential Learners / Global Learners*

The student's learning styles may be changed from time to time, and may be differ according to subject and learning environment. More explanations about each learning style of the Felder-Silverman Learning Style Model can be achieved at:

http://www2.ncsu.edu/unity/lockers/users/f/felder/public/Papers/Secondtier.html.

This learning style model is chosen as a reference in order to develop an Intelligent Adaptive Hypermedia System that adapts its behavior to student's learning style. By using this model, a template for teacher to create the content is provided so that teacher can assign teaching strategies according to the student's learning style, not their teaching style!

3. System's Architecture

This system will use World Wide Web as a medium for learning and teaching. Figure 3.1 shows the system's architecture where teachers and students can interact with the system via the adaptive WWW interface. Teacher use the interface to author content, check the status of the content (whether meet the requirement of the learning style or not), and view student's current state of any topics. While student use the interface to take pre-test to determine their learning style and the level of knowledge, and learn the topics according to their preferences. They don't need to download the intelligent software because all the process will be conducted on server side that contain an engine (content administration and content generator) and database. In the engine, there are three components that process the content, generate an appropriate content and doing pedagogical actions. There are content edition component, content validation component, and adaptive content generation component. While in the database, there are three components. There are Domain Module (Knowledge Base), Student Model and Tutor Module. All the information (about teachers, students and contents) will be stored in system's database.
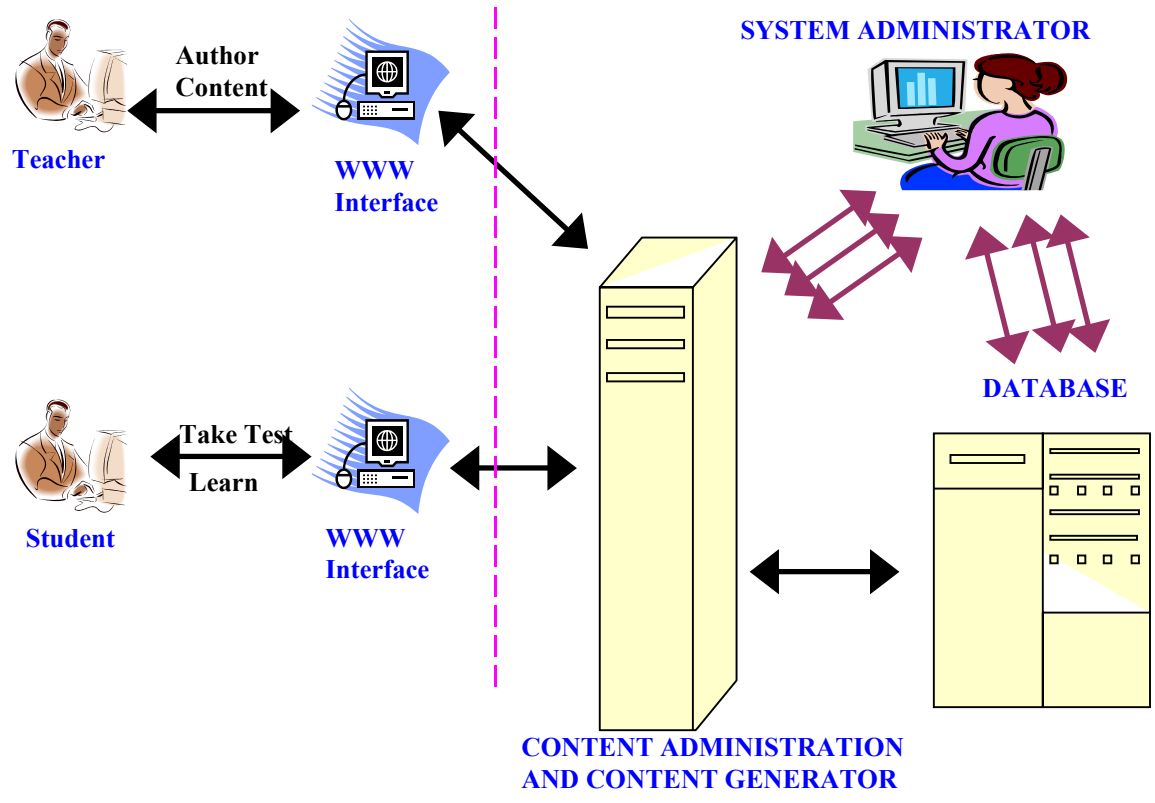
Figure 3.1 : System's Architecture

While figure 3.2 shows the flow of actions whenever teacher author the contents and students start the sessions.
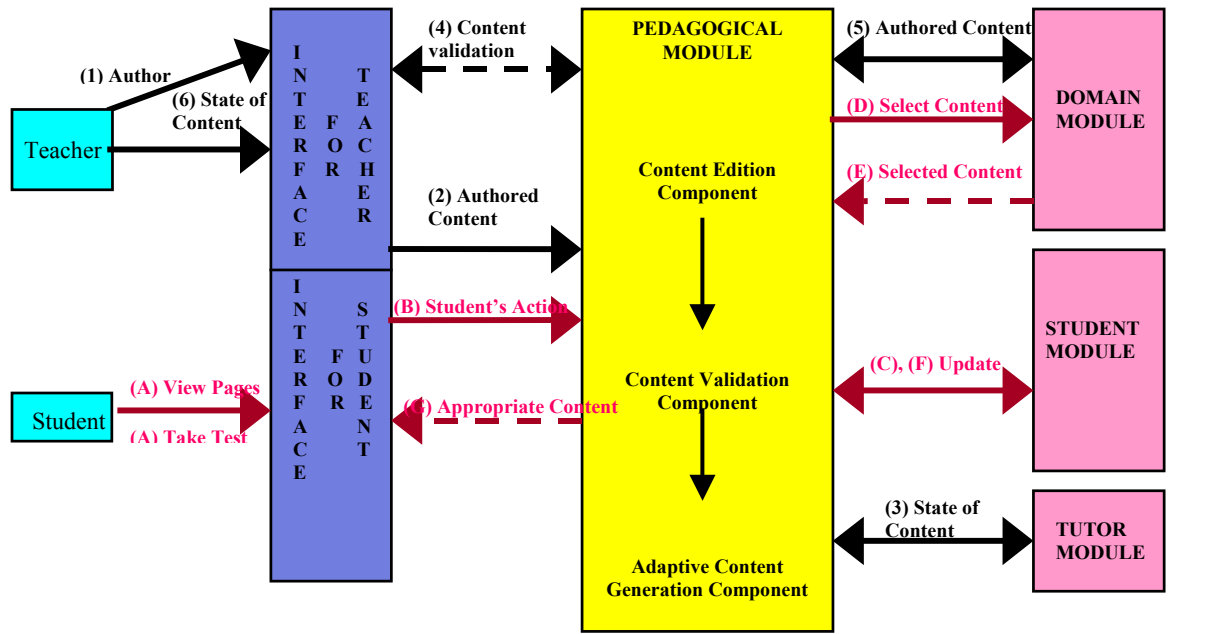
Figure 3.2: Flow of actions and the integration of components involved.

3.1 Description of the flow of actions happened in the integrated components.

In this system, teachers and students are the users who have different tasks and target. Teachers play part as the developer for Science subject according to student's learning style where the information (about the content authoring) is provided by **Pedagogical Module**. In the other hand, students use the system to enhance their performance in Science subject.

Teacher and student interact with the system via WWW interface. Teacher and student have different interface. For teacher, they will be given a tutorial about learning styles and types of content that is appropriate to the learning styles. After that, teacher will choose learning style and the appropriate template for that learning style will be given to

teacher (Figure 3.3). The component that allow teacher to do so is **Content Edition Component**. This component allows teacher to define the structure of the domain such as the relations between content and the learning style, and the relative weights of the content (according to certain level of students understanding). This information (about the content specifications) will be stored in Tutor Module. Once the content has been defined, there is a component that validates their elements. The **Content Validation Component** activates the contents so that it can be used by the Adaptive Content Generation Component to generate the appropriate content to the student. If the content does not meet the type of learning style, a feedback will be given to the teacher. The information about the authored content will be stored in knowledge base (Domain Module).
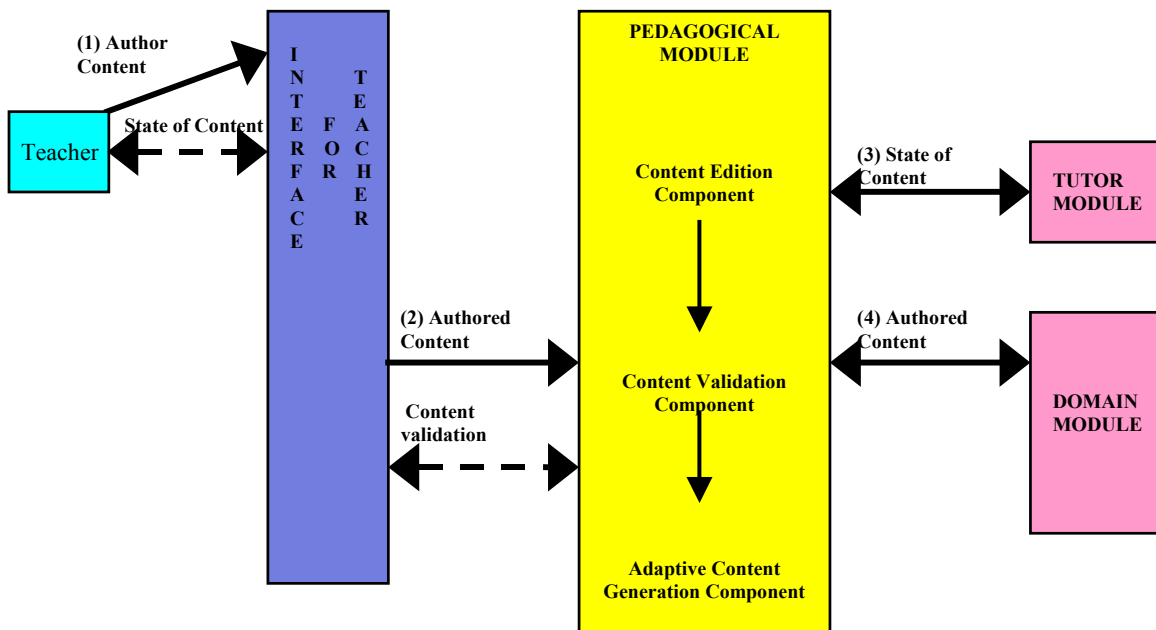
Figure 3.3: Flow of the authoring part for teacher.

Student will start the session by first taking pre-test to determine their learning style and their level of knowledge (Figure 3.4). After they have taken the pre-test, student will be grouped into his/her learning style and the learning session will begin. The information about the learning style and the level of knowledge will be stored in Student Module. The **Adaptive Content Generation Component** responsible of selecting appropriate contents (from Knowledge Base/Domain Module) that will be provided to the student. The content generation process will be guided by the specifications defined by Content Edition Component and by referring to Student Module.
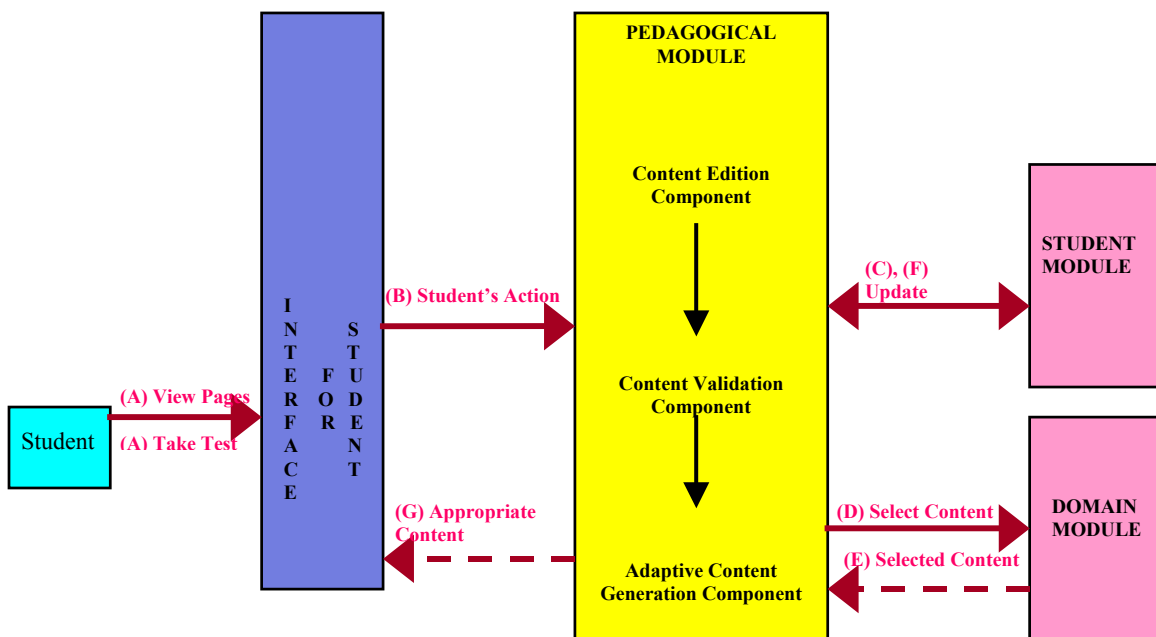
Figure 3.4: Flow of the content generation for students.

Every action that the student takes (for example proceed to next unit, or go back to previous page) will be monitored by the system and the information will be update by the Student Module.

Functions of the integrated components are described below:

1) Interface

Interface is one mechanism for teacher and student to interact with the system. The main target of the interface is to display information to the teacher and student.

   a) Teacher's Interface

   On this interface, there is menu where teacher can choose learning style and the assigned template will be given to the teacher to author content. This interface will display the status of the template whether the content meet the specifications or not. If the content doesn't meet the requirement, teacher can edit the content.

   b) Student's Interface

   Student will use the interface to take pre-test to determine their learning style and the level of knowledge. They also use the adaptive interface to learn the subject where the content is generated according to their way of learning.

2) Pedagogical Module

This module will made decision about the learning and teaching process. It will use information from the Student Module to determine when new topic should be provided to student, revising previous topic or give feedback to student. The module also

decide which template should be given to the teacher according to the selected learning style and return all the information about content and student to the Domain Module and Student Module to be updated.

The Pedagogical Module contain of three components. There are:

a) Content Edition Component
b) Content Validation Component
c) Adaptive Content Generation Component

3) Domain Module/Knowledge Base

All the authored and validated contents will be stored here. This module is also known as the Knowledge Base of the system. These contents will be stored in different groups according to the learning styles. In the knowledge base, types of knowledge that is going to be provided to the students such as concepts, tasks, questions, actions, examples and explanations will also available here. There are also collections of text, pictures, procedural simulations, and voice (audio) that is appropriate to the student's needs.

4) Student Module

This module keeps information about students such as personal information (PMR result – for Form 4, and Form 4 final exam result for Form 5), student's ID (for identification when they use the system), student's learning style (whether she/he is a visual/verbal, Sensing/Intuitive, Thinking/Feeling and etc), student's level of knowledge about the topic, and the current achievement or current knowledge. This information will be used by the Pedagogical Module to make decision such as what type of content should

be presented to students and type of feedback. Teacher also can reach information about student's level of knowledge and their performance so that they can improve and edit the subject content.

5) Tutor Module

This module functions as information storage about content that has been authored by teacher. Types of information that this module stored are template status (edited, date of authored etc).

5.0   Conclusion

Adaptive Hypermedia System makes the learning system easier. It is an innovation of new technology that contributes a lot to education field. Traditional teaching technique in class has to be carried out since the new technology is only an assistance that can enhance student's performance and understanding. Student's learning style should not be neglected because the learning style determined how far and how much they can understand and perceive the information that the teacher teaches in class. WWW technology that is developing from time to time offers new features such as the intelligence in the system. So with all the sophisticated technologies, the education fields will be more advanced and students/teachers can take this advantage to fill themselves with knowledge and skills.

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PROCEEDINGS   THEME 1   THEME 2   THEME 3   THEME 4

INFUSING TECHNOLOGY INTO PRE-SERVICE TEACHER EDUCATION

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Abstract

Although 5.8 million computers are located in American public school classrooms, a large percentage of teachers remain unprepared to use instructional technology in the classroom. This paper explores the ways two Murray State University professors have integrated technology into their educational coursework to prepare pre-service teachers to use technology in their future classrooms.

Today, high-tech skills are in demand in the work force more than ever before. Parents and educators strive to equip children with the technological skills they will need to compete in a global economy. Several research findings suggest positive effects of technology incorporation into the learning process (Barron & Ivers, 1996; Cline & Mandinach, 1994; Considine, 1987; Johnston, 1996; and Morgan, 1996). Computer-based instruction has the potential to actively engage students in the learning process by meeting their varying needs and enabling students to reach their full academic potential. Well-designed multimedia computer programs motivate students to apply what they have learned in meaningful activities that encourage the development of higher-level critical thinking skills. Therefore, one of the greatest challenges facing teacher educators is determining how to mesh leading edge technologies with twentieth century pedagogy.

Nowhere is this problem more apparent and nearer crisis proportions than in educational leaders' efforts to encourage teachers to embrace available technologies.

The Office of Technology Assessment (1995) estimates that the number of computers in K-12 schools increased by 300,000 to 400,000 a year during the past decade. The total number of computers in schools is estimated to reach 5.8 million, or one computer for every nine students. Cuban (2001), in his in-depth study of classroom computer use, highlighted the apparent contradiction of high access and low use. He found that less than ten percent of teachers who used computers in their classrooms were serious users; between twenty and thirty percent were occasional to rare users; and well over half of the teachers were nonusers. Teachers have the technology, but they still are not using it (Table 1).

Table 1. Teachers who use computers in their classrooms
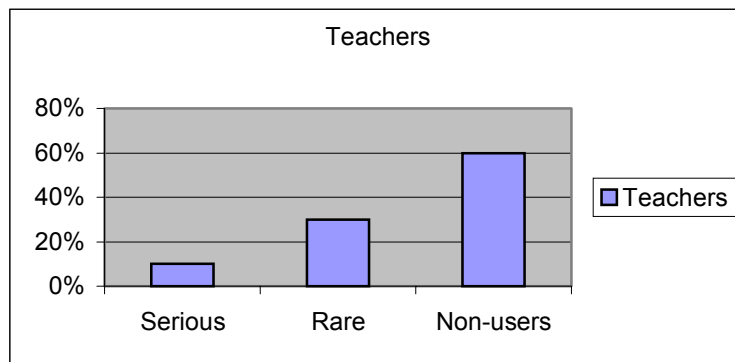
The most common reason given for the low level of computer use in schools is lack of training (Bosch & Cardinale, 1993). A number of studies and reports reveal that both new and veteran teachers feel inadequately prepared to use computers in their classroom

(American Association of Colleges for Teacher Education, 1987; Bosch & Cardinale, 1993; Topp et al., 1995). The Office of Technology Assessment (1995) found that while more than half of teachers surveyed reported being prepared to utilize drill and practice, tutorials, games, word processing, and publishing applications, less than ten percent felt competent to use multimedia and presentation packages, electronic network collaboration capabilities, or problem solving applications.

Current teacher education curricula must include direct instruction and application components to assist pre-service teachers in their endeavors to develop proficiency in integrating technology into their classrooms. To address this perceived deficit in teacher education programs, Kentucky educators and legislators designed a series of New Teacher Standards that detail what first year teachers should know and be able to implement in their classrooms. New Teacher Standard IX directly addresses the use of instructional technology in the classroom: "The teacher uses technology to support instruction; access and manipulate data; enhance professional growth and productivity; communicate and collaborate with colleagues, parents, and the community; and conduct research." (Kentucky Education Professional Standards Board, p. 4). Students and beginning teachers are evaluated according to their ability to:

1. operate a multimedia computer and peripherals to install and use a variety of software.

2. use terminology related to computers and technology appropriately in written and verbal communication.

3. demonstrate knowledge of the use of technology in business, industry, and society.

4. demonstrate basic knowledge of computer/peripheral parts and attend to simple connections and installations.

5. create multimedia presentations using scanners, digital cameras, and video cameras.

6. use the computer to do word processing, create databases and spreadsheets, access electronic mail and the Internet, make presentations, and use other emerging technologies to enhance professional productivity and support instruction.

7. use computers and other technologies such as interactive instruction, audio/video conferencing, and other distance learning applications to enhance professional productivity and support instruction.

8. request and use appropriate assistive and adaptive devices for students with special needs.

9. design lessons that use technology to address diverse student needs and learning styles.

10. practice equitable and legal use of computers and technology in professional activities.

11. facilitate the lifelong learning of self and others through the use of technology.

12. explore, use, and evaluate technology resources: software, applications and other documentation.

13. apply research-based instructional practices that use computers and other technology.

14. use computers and other technology for individual, small group, and large group learning activities.

15. use technology to support multiple assessments of student learning.

16. instruct and supervise students in the ethical and legal use of technology.

To actualize this vision of effective implementation of instructional technology, Kentucky legislators created the Kentucky Academy of Technology Education (KATE) in 1996. The purpose of this academy is to design professional development opportunities to improve the use of instructional technology. Although the KATE offices and personnel are located at Murray State University, their efforts outreach to all educational institutions and classrooms throughout the state. KATE experts work closely with Murray State University's College of Education faculty. KATE's mission is to encourage faculty and pre-service teachers to learn to integrate technology throughout the educational process. Because of Kentucky educators' and legislators' focus upon instructional technology, Kentucky students now rank among the top five states in the use of technology. (KATE, 2002).

For the past several years, KATE has provided extensive training opportunities for the faculty and student teachers of the College of Education (COE) at Murray State University. Moreover, KATE experts worked closely with COE administrators in the design of the new education facility, Alexander Hall. Every classroom is equipped with

two desktop computers, a Smart Board projection system, TV, overhead projector, and VCR. All faculty members have laptop computers to connect to the projection devices for classroom presentations. Furthermore, Alexander Hall houses two computer classroom labs and a large student computer lab, with over 150 computers available for faculty and student usage! How do COE faculty and students use this technology? This paper examines faculty use of instructional technology and the training provided to prospective teachers by Murray State University's Department of Early Childhood and Elementary Education.

Interactive Learning

Dr. Chhanda Islam and Dr. Jacqueline Hansen have integrated instructional technology in several courses they teach at Murray State University. Their effective implementation of instructional technology in course delivery makes the instruction more relevant, responsive, and meaningful for students. Through Islam's and Hansen's modeling of instructional technology and students' completion of course assignments using technology, pre-service and in-service teachers are exposed to sophisticated technological tools such as electronic networks, integrated media, and problem-solving applications. Undergraduate and graduate students develop their technological proficiencies through their active involvement with diverse technological activities, including: *Blackboard*, electronic mail (email), presentation programs, the Internet, and long distance coursework.

Blackboard is a computer program that enables students to access course materials via the Internet. Drs. Islam and Hansen place their course syllabi (objectives, schedule, assignments and grading), calendar, assignments, evaluation criteria, and contact information online. They enrich their course content by providing easy student access to related websites and supplemental materials. The *Blackboard* communications component allows faculty and students to send email messages to any or all course participants. Furthermore, students and faculty may interact through a discussion board or in a virtual class setting with this program.

Students and instructors use email to communicate with classmates and faculty members. Students are required to submit most assignments via email. Furthermore, in Dr. Hansen's *Introduction to Education* course, students conduct email interviews with master educators to learn more about the education profession. Student teachers email weekly activities, professional growth plans, and professional portfolio reflections to their university coordinators. These activities require students to become proficient at communicating with colleagues via email.

Drs. Islam and Hansen provide training opportunities for students so that they may become more technologically proficient. By observing Islam and Hansen's classroom presentations, and through formal training sessions, students learn how to use computer programs such as *Power Point, Microsoft Office Products, Timeliner, Kidspiration,* and *Inspiration.* Students apply what they have learned through course assignments. In Dr. Hansen's *Introduction to Education* course, student teams are required to use

instructional technology when presenting the results of a group research project. In *Strategies of Teaching,* students are formally trained to use *Kidspiration, Power Point,* a videotape machine, and an overhead projector. Their knowledge is applied when they are required to use technology during their peer microteaching experiences. Their lessons are videotaped so that they may assess their teaching effectiveness using instructional technology. In their graduate courses, *Foundations of Literacy* and *Readings and Research in Children's Literature,* Drs. Islam and Hansen require students to use instructional technology as they create and present research projects and thematic units. Students' ability to use instructional technology is formally evaluated during their student teaching experiences. Student teachers also work closely with KATE experts to create electronic portfolios demonstrating their abilities to meet the Kentucky New Teacher Standards.

Students use the Internet to access a spectrum of educational resources. Students can access a database of all Murray State University library materials online. Students further their research by exploring ERIC database, Kentucky Virtual Library, and Internet resources. All College of Education forms, schedules, course catalogs, faculty information, advising forms, and teacher education materials are found on the COE website. The Kentucky Academy of Technology Education website (http://coekate.murraystate.edu/kate/) offers multiple resource materials including hotlinks to educational websites and tutorials for various educational computer programs.

When educational coursework can be accessed via technology, students become part of a larger community of learners. Murray State University offers several web-based courses where students and instructors communicate entirely online instead of in a traditional classroom setting. To extend educational opportunities to long-distance locations, Drs. Islam and Hansen offer graduate courses via ITV, interactive instructional television. They teach courses to a classroom of students on-campus. These sessions are simultaneously transmitted (via satellite) to long-distance off-campus sites. Students at the long-distance sites can see and interact with the professor as if they were attending class in the traditional classroom. For these courses, the professors and students make extensive use of fax machines, Blackboard programs, and email to communicate, disseminate materials, and submit assignments.

Student Reactions

To assess students' developing technology proficiency throughout their education coursework at Murray State University, COE faculty work with KATE experts to administer a technology survey at the beginning, middle and ending points of their academic careers. Faculty piloted the surveys last year. During the 2002-2003 academic year, surveys will be administered in three core education courses and during the final student teaching seminar. Results will be analyzed and shared with COE faculty to determine areas of continued student technological needs. The survey instrument may be accessed online at: http://www.hprtec.org/profiler.

To assess students' perspectives, Dr. Islam interviewed graduate students in her *Foundations of Literacy* course. This is a graduate course in reading and writing instruction designed to enable classroom teachers to model and implement a variety of research-based instructional strategies and activities in an authentic instructional context. Through informal conversations with students, Dr. Islam ascertained that the Internet enhanced her ability to communicate with each student using e-mail, discussion lists, or chat rooms to improve their understanding of technology and teaching. Students were required to use the Internet to conduct research and identify curricular materials to use in their classrooms. They used instructional technology to present their research and to create instructional units. Ninety-six percent of the students said that they searched the World Wide Web for information to make choices of hardware and software to use in their classrooms (Table 2). Ninety-five percent of the students said that they used presentation software such as PowerPoint to create a multimedia presentation (Table 3). Ninety-nine percent of the students conducted research using the Internet and World Wide Web (Table 4).

Table 2. Using World Wide Web to Select Hardware and Software
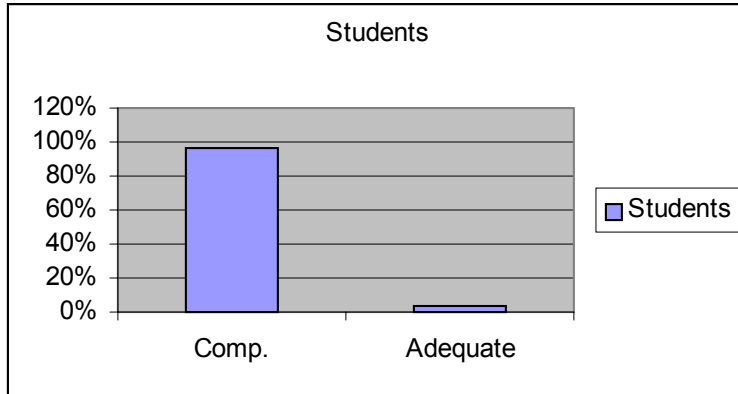
Table 3. Using Presentation Software
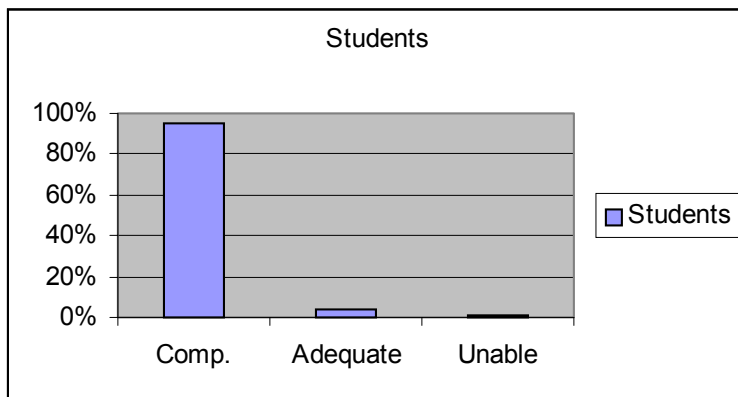
Table 4. Conducting Research Using Online Resources
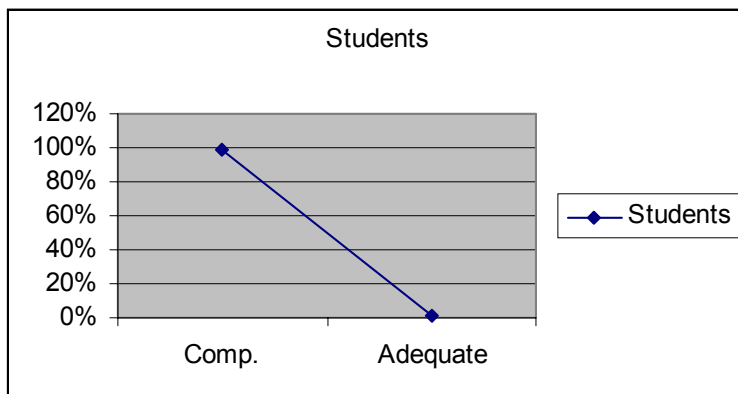
Dr. Islam's students accessed the web for materials to enhance their efforts to promote children's literacy. Here are some students' reactions to these activities:

- I was extremely impressed -- http://www.toread.com/ is a completely new web site to me. I probably have 200 favorite web sites saved that cover our curriculum, reading and library information. However, I have never visited this site. One can find any subject of interest that has to do with reading. I hardly knew where to start…. Exploring this web site should give me the information I need.

- There were three links that are appropriate to the topic… entitled:
    - *What are Literature Circles?* http://toread.com/strategies.html
    - *Literature Circle Roles*
      http://home.att.net/~teaching/litcircl/roles.pdf
    - *Literature Circles Resource Center*
      http://fac-staff.seattleu.edu/kschlnoe/LitCircles/

  The information in these sites is invaluable and I am sure I will visit them again if and when I have an opportunity to develop literature circles.

- The first link I perused was *What are Literature Circles?* I really need this basic information. I found that a structured reading activity encourages higher order discussion around good books. Teachers act purely as facilitators. The environment is an informal setting where natural conversations about books

take place. The students are allowed to choose read and discuss their own books. Students are not bound by discussion plot, theme, setting. However, they must take responsibility as readers and group members.

- The *Literature Circle Roles* link brought up role work sheets. The link to *Literature Circle Resource Center* … covered the same information as the first sight, except it went into more detail about choosing books. It also had a discussion site where you could "talk" with other teachers about literature circles as well as offering more literature circles links for further or different information.

- All of these sites offer invaluable resource information for neophytes like me just trying to learn the basics. They offer the information to take the first steps in literature circles with an opportunity to have a discussion with teachers who are using the methods now. I know I will be visiting these sites again, and http://www.toread.com/ is now saved in my favorites file.

When students accessed the *Kentucky Virtual Library* and *ABC News for Kids*, they had these reactions:

- This would be a fun site to have students visit to learn more about things of interest in the news as it relates to children.

- The *ABC News for Kids* site was impressive. All I could think about while I was visiting this site was how I would use it daily in my classroom.

- *ABC News for Kids* is a radio show. The students will be able to hear the daily broadcast at this site, online.

- It also had an icon "email us" where the students could ask questions or comment about something in the news and they would respond back.

Finally, Dr. Islam invited student comments about using *PowerPoint* and *HyperStudio* to create multimedia presentations:

- Using *PowerPoint* and the Internet have become a vital part of our learning process in this class. It has allowed me to learn the important usage of both pieces of technology in my classroom.

- I think that combining the digital camera, Internet, and *PowerPoint* all into one project would make for a fun and exciting lesson! I can't wait to put it all together when school begins!

Conclusion

Through their observations of students' abilities to use technology in completing course assignments and making presentations, Drs. Islam and Hansen have concluded that their students are relatively proficient at using technology in their coursework. The majority of students are able to use email to communicate with the professors and classmates. They use *Microsoft Word,* digital cameras, *Excel,* and scanners to assist their publication efforts. Students access the Internet and World Wide Web for educational research and acquisition of quality curricular materials. They use software such as *Kidspiration, Hyper Studio* and *PowerPoint* in classroom presentations. Drs. Islam and Hansen believe that

requiring students to use technology in their education courses has motivated them to

teach their future students to use technology as well.

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VIRTUAL EDUCATION: ISSUES AND CHALLENGES OF E-LEARNING IN THE FACE OF A LEARNING REVOLUTION.

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Abstract

This paper describes the issues and the challenges faced in the ardor of creating a much better environment of the existing virtual education. Rich in potential, the concept of e-learning has introduced a new revolution in the evolution of virtual education. Issues are explored from the angle of legal and policy notions that have been argued for decades. Cultural considerations that have radically transformed the virtual society in the sense of a cultural shift, language barrier and differences due to the interaction manner, will be exploited in the issues regarding e-learning. In the midst of its evolution, e-learning is indeed set to face the challenges of the future. Moving towards an integrated learning environment, e-learning's arduousness surrounding the community will be tapped from the arena of social and psychology differences. Hence, the future implication on its community lies on the key of characteristic, which is used in designing a more successful e-learning environment with better features. Criteria such as brilliant graphical guidelines with understandable content, text of fashionable length and the font style blended with appropriate color, compatible software and hardware platform are among the features for a successful e-learning environment.

1.0 Introduction

The use of computer technologies to enhance learning began in the late '60s with the efforts of pioneers such as Atkinson and Suppes (Riva, 2001). Since then, virtual education has replaced traditional learning in schools, homes and work places. The

change from traditional education methods to online learning is not something that can be implemented within days or weeks. Issues and challenges are two things that can never be avoided in a revolution. E-learning, in simple terms can be defined as training that takes place through a network, usually over the internet (Darwin Magazine, 2001). It was used originally in computer-based training during early 80s, in form of CD-ROMs (O'Neill, 2001).

Basically, e-learning can be divided into two categories, which is synchronous and asynchronous. Synchronous e-learning imitates a classroom where instructors and students are connected via streaming audio or video or through a chat room (S K Pulist, 2000). In short, a synchronous circumstance takes place in real time. Whereas, asynchronous e-learning lets a student access prepackaged training on his/her own time, own pace and having communicating through email (S K Pulist, 2000). Therefore, it is well said that knowledge can be created and shared beyond time constraints and geographical boundaries.

This is also another way where developed nations can help the developing countries. Malaysia in particular, has ventured into partnerships with renowned universities from Great Britain, United States, Australia and New Zealand to offer twinning programs, distance learning and Open University programs (Haji Azmi bin Zakariah, 2000). This collaboration was possible through e-learning, where learning and teaching can take place at anytime, from anywhere and by anyone. With that, Tun Abdul Razak University became Malaysia and Commonwealth's first virtual university (Ibrahim Ahmad Bajunid, 2001).

This goes to show that the power of e-learning to transform learning is vital to the development of a nation and its generation. The purpose of this paper is to look into issues and challenges of e-learning concept and system, which will then bring us to the exploitation and strategies that influences a good e-learning model.

2.0 Issues

One of the biggest advantages of e-learning is that it is delivered via the web. This way, information can be updated daily, even up to the minute with relevant new topics which can be accessed from anywhere or anytime. So, for timeliness variety and flexibility, e-learning is certainly an ultimate learning tool (Frankel, 2001). But, unless e-learning principles are structured appropriately, we would just end up with systems that are unsuitable for the society. Two such issues that must be given considerations are culture diversity and policies concerning e-learning.

2.1 Culture considerations

Today's generation are living in a culture of innovation, collaboration and networking. Cultural consideration is one issue that takes time to be entrenched in the transformation from traditional learning to electronic learning. Most developer's think that creating an e-learning system is easy but they tend to forget that million users from different nations, backgrounds, ethics, gender and age group use such system. Thus, cross culture

differences due to language, teaching method, learning style, interaction manner and communication are becoming critical issues in e-learning.

Duarte and Snyder (1999, p.54) defined culture as

" A set of learned moves, values, attitudes and meanings that are shared by the members of a group. Culture can be viewed as the collective programming that separates one group of people from another. One way to look at culture is as the hidden "scripts" that people use to guide their behaviors".

Avoiding culture differences in on-line education can cause significant impact to the users. Culture considerations should be rooted from an early stage.

Reushle and MacDonald summarized an outline consisting of culture differences based on the work of Duarte and Snyder (1999). Those differences include language, individualism-collectivism, power distance, uncertainty avoidance, long-term and short term and context in a culture. Hung, Chen and Thanq (2001) have also determined communication and interaction as a cross culture differences. Their opinions will be combined to examine how culture characteristics differences affect e-learning.

Communication and interaction are two key features in a learning process (Riva, 2001). But e-learning is excluded of these two features. According to Vygotskian, the culturally specific nature of learning demands close attention to the way in which any particular practice structures interactions between people and artifacts (David W L Hung, 2001; Chen, 2001; Der-Thanq, 2001). At least synchronous e-learning takes place in real time where instructors can communicate with users using streaming video or the chat room (what is e-learning). But asynchronous e-learning method is the opposite. It is fully

deprived of communication and interaction, except for having the chance of mailing someone but with doubt whether the person would reply or not.

Since the web is dominated by asynchronous e-learning systems, it creates a problem to the group of people who believe in face-to-face communication and interaction during the learning process. These people believe in metacommunicative features where face to face conversation and one's voice is involved (Riva, 2000). In short, they prefer to preserve traditional education methods compare to a non-reality situation (virtual environment), which exists in e-learning. Moreover, it is considered inappropriate behavior for students from some cultural background to discuss, interrelate, and change ideas and challenge opinions from other learners in a web-base education environment.

Another culture contemplation is the use of language in e-learnings. In her research, Chen (1999) stated that language is more than just a functional means of communication and technical matter. Human language actually emulates how individuals think, interact with each other and how they approach learning task (Shirley Reushle, 2001; Jacquelin Mcdonald, 2001). Since there are no any policies requiring for standard language, many e-learning systems are developed in the developer's native language, causing inconvenience to those who cannot understand the language. Language barrier is one of the main problems faced in the revolution of online learning. Diversity of language and preferences mode of language is an important consideration when designing an e-learning. Vocabulary and grammar also can convey different levels of politeness in different languages (Shirley Reushle, 2001; Jacquelin Mcdonald, 2001).

One fine culture differences that can be seen clearly is between the western and eastern realm. Not only in every day's life but also in their learning manner. Western cultures prefer "individualism" where they believe in personal achievements, independence and short-term success. Short-term culture shows a westerners spirit in getting answers quickly and solving a problem as soon as possible. Whereas, in eastern culture, its users believe in "collectivism". Importance is given to group cooperation where work is done and whatever recognition is received in a team spirit. Easterners, mostly Asians also follow the long-term culture. They deem that long term success bears better fruit in the e-learning process. With such differences, it is certain that exporting students and importing courses causes threat to one's identity, culture and family values (Cunningham, 1997).

Power distance refers to the extent that the less powerful members of the population expect and accept the power, which is distributed equally (Shirley Reushle, 2001; Jacquelin Mcdonald, 2001). After being in a society where discipline and compliance to higher authorities is praised and valued, these members find it hard to contribute in a learning environment, which demands one's opinion, discussion and exchange of ideas. Members of high power distance will not feel such inferior complexity because they are so use to such technologies.

Individuals from culture with high "uncertainty avoidance" prefer standard guidelines. They believe in following procedures by the book and having everything outlined perfectly. That way, they feel safer and confident doing online education. It is the

opposite with individuals from low "uncertainty avoidance" culture. These individuals tend to feel safe with none or even unclear guidelines.

The extent of a content in a e-learning system also effects culture consideration. Learners from high-context prefer learning systems with rich information that provides good communication and interaction capabilities. For these group of people, synchronous e-learning suits well. Learners from low-context cultures on the other hand, would not mind asynchronous mode of learning. For them low profile of communication, interaction and sufficient amount of knowledge is adequate.

Cultures also have religious principles that cannot be violated, such as foods, icons or particular forbidden behavior (Shirley Reushle, 2001; Jacquelin Mcdonald, 2001). For example using an icon that resembles a pig may offend the Muslims as it is taboo in their religion or using a cow as a food symbol may insult the Hindus as it is considered a sacred animal. Color also can culturally effect the learning environment. The color yellow for example means caution in most Western countries, whereas in China it means wealth (Sellin and Winters, 1996). Language with unusual style also affects a e-learning system's features. For example, Chinese and Arabic language start from right to left and therefore all icons, images and texts should be right-aligned (Joo, 1999).

Apparently, it is important that designers acquire culture knowledge before starting to design the features of an e-learning system. Features such as graphics, pictures, color, symbols, audio, text, content and fonts should be appropriate so as it is accepted globally.

Culture considerations are another barrier in the challenge of learning electronically. Reushle and McDonald concluded from Chen's observation that there is no such thing as pure culture as cultures evolve and change over time. Therefore culture issues are problems that can never be solved. But developers can certainly find alternative ways to overcome the problem as it crops up. Cross culture may cause some hindrances but its combination also may bring a new revolution in online learning.

2.2 Policy and legal perceptions

It is essential that adequate policies are laid out and legalized for a compatible system. To date, no standard policies have been issued to e-learning developers. Most of them make their own rules and regulations. Apparently, it is quite hard for developers to come up with standard policies that can cater for everyone. People from all walks of life with different background and culture diversity such as language differences, religion disparity and variety experience make it hard for customary policies. Most developers certainly prefer constructing an e-learning system that precedes its regions policy rather than a foreign country's. But then, if there is a legalized universal education policy, developers certainly may prefer using it. That way, their system will be accepted globally.

Naturally, the suggested policies must fill in the state, federal and government's requirements. Thus, it should be enforced as a global law with few exceptions according

to each of the country's constitution. Institutional policy, web security and copyright issues are some of the existing perceptions.

One policy that should be initiated is verification of accessibility. E-learning developers tend to forget individuals with disabilities (Hricko, 2000). Consideration should be given to this group of people whom find it hard to make use of the normal e-learning system, which is abounded. Accessibility aids, such as alt tags and transcripts of audio files are helpful for users with disabilities who may require screen readers to tell them what's on the page (Tang, 2000).

Decision makers should be careful not to make policies that will widen the gap between the rural people and urban people (Laura M.Francis, 2002; Randy Emelo, 2002). Since the urban community has access to better infrastructure, developers tend to use technologies that are unavailable to the learners from rural vicinity. Policy makers must take into consideration the interests and capabilities of these people. Also one should give careful thoughts to schools and organizations that do not have basic infrastructure for e-learning. Creation of standard policies for e-learning will certainly give an opportunity to these people to further their knowledge and continue their education in the latest technique conquering today's learning environment.

Each developer also must verify electronic rights on their e-learning system, if it is web-base. They have to claim ownership to the electronic rights of their e-learning content. Normally, the e- rights are bought or a license is purchased. Either way, it is better to get a professional view or hire a lawyer to deal with the procedures (Lori Mortimer, 2001).

3.0 Challenges

E-learning has remained an elusive but promising vision being promoted and implemented (Utsumi, 2001). The vision of e-learning starts with the assumption that computers and the Internet have the potential to help people learn by delivering personalized instructions. Moving from traditional methods of learning to virtual learning is not without its risk. For all parties concerned, this represents higher involvement, bigger responsibilities and greater challenges. Revolution does not come without challenges. Developers tend to learn from these challenges to create a better learning environment according to learners' preferences and requirement. Some of the usual challenges faced are during the early stage of developing e-learning, where a developer has to plan the features of the system. Here the developer has to give culture considerations, policy contemplation and users preferences. Another area of challenges will be the consequences from its implementation. These consequences will be tapped from the perspectives of psychology and social challenges.

3.1 Social

In recent times, one of the most important challenges in the education sector is the challenge of bringing about e-learning into the education system (Dwyer, 1994; Sandholtz et al, 1997; Baer, 1998). At school level, e-learning is coming into the system through the notion of smart schools (Perkins, 1992). Most schools especially the ones in rural area are not exposed to e-learning. As development is always focused in urban areas, thus rural people are less exposed to the latest technology and have fewer

infrastructures compare to their counterparts. Therefore, the education system is never in a level and the gap between rural and urban community widens by the day. In most developing nations, it is still an issue whether e-learning should be introduced in schools. Computer literacy in these nations is still considerably new. E-learning itself covers a wide range of teaching-learning models, so much so it is unclear on which standard method should schools settle on.

E-learning is becoming one of the basic literacy in the globe, across gender, age groups, and ethnic groups and even across socio-economic and education levels. But not everybody is given the chance to taste the experience of using an e-learning system. People with disabilities can never use most of the e-learning system developed. Developers should create e-learning programs to help the disabilities. This would give them a chance to educate themselves easily. Furthermore, e-learning can also be used to help learners with severe reading difficulties. They can take their own time and pace to improve their complexity. School or higher institution dropouts also can have a chance to continue their education and obtain knowledge through e-learning.

Delivered over the Internet, e-learning does everything a textbook can do and much more. It creates a learning environment that is meaningful to learners, responsive to learners needs and easy to manage for instructors. It also improves the educational experiences by letting users to learn at their own convenience of time and pace. But this may lead to some trouble. Learners with a low level of concentration may take their own sweet time to complete their learning module. During the learning period, their

concentration may also stray towards chatting, playing games or surfing other web pages. With so much of time at their side, learners especially teenagers will have the tendency of exploring inappropriate web sites. It is well know that students can waste a lot of time surfing the Internet (Riva, 2000), which may cause increase in social illness.

Jung (2000) in her annotated bibliography found that virtual based education provided more and better forms of learning dialogue and learning communities where its environment could be adapted to suit different student characteristics, such as prior knowledge level and preferred study modes. Nevertheless, some experts will still argue that education value is not in the content but in the conversation. The kind of value meant, can never be found in an e-learning environment because the nature of communication depends hugely on voice inflection, body language and the immediacy of multiple responses. It is still a norm in majority of the society that for education to be meaningful and relevant, it has to be active and engaging. That cannot happen if student's only interactions are through a modem, unless synchronous mode of e-learning is widely practiced. However, artificially intelligent instructors cannot substitute for classrooms where the sense of community established in particular scenarios have strong effects on a student's achievements (Riva, 2001).

Other challenges that learners face are lack of prompt feedback, ambiguous instructions on the web and technical problems. As new innovations are introduced everyday, it is essential for educators and trainers to constantly enhance their understanding of the issues, trend and opportunities with e-learning and its related technologies and their impact on learning (S K Pulist, 2000). E-learning using online program have vulnerable

support services and a highly sensitive index of transactional distance (S K Pulist, 2000). Therefore, it is important to ensure ample of technical support is provided by the supporting institution and the developer in concern.

Despite it social challenges, e-learning enables learners to explore the diverse sources of evidence, to construct and defend a range of issues and ideas and to make plausible interpretations in critical and personal ways (Yang, 2001).

3.2 Psychology

Embarking on a new experience of learning can be gratifying and at the same time alarming for some learners. If everything goes on well without any chaos, it will really intrigue the learners. But then if learners do not obtain what they seek, it may affect them psychologically. That would also depend on which category of learners do they fall. Basically, there are three kind of learners; eager adopters, resisters, prove its (Linda Ristow Puetz, 2000). Eager adopters are people who are very enthusiastic about using technology, whereas resisters find technology intimidating and hate to use them. Prove its are people who do not mind whether technology exist or not and if given an opportunity to use it, they will exploit it.

Technology is seen as a medium that can deliver instruction that meets the different learning styles of learners (Brooks, 1993; Joyce, 1996). In the wise of e-learning, its modes are individualized and personalized. This tends to isolate students physically, which can have negative effects on team building and sociability. Student with an

aptitude for verbal expression may suffer in the verbal classroom. Despite its interactivity, sitting alone and studying from a computer screen seems so passive compare to looking people in the eye and literally speaking your mind in a live conversation. But one advantage is that, learners who feel shy about speaking in front of people would not have problem in a virtual environment.

Capturing learner's attention for a length of period is not an easy task. Most learners can get bored very fast as e-learning involves individual presences. E-learning environments should create a situation where there is continual interest and interaction (Hung and Chen, 2001). Technologies such as collaboration, interactivity, modeling, simulations and virtual reality interfaces will not only enrich e-learning but also hold learners attention. For example, collaboration technologies such as instant messaging, chat rooms, shared geographical space and community software can help to enhance e-learning and its users. Busy work alcoholics, having to learn on their own time can add to the workload of an already overstressed life. Perhaps, simple games could be included in e-learning systems to give learners occasional break.

Unsupportive technology like medium breakdown and can play havoc to the learner's mindset (S K Pulist, 2001). Providing too much of information without valid purpose through hyperlinks and frequent congestion during online can effect learners motivation and disorient them (S K Pulist, 2001). At times, they are unable to find the needed information or skills in the participated subject or sometimes the subjects itself have problem using the application function. The effective use of technology for learning

requires the system to be user-friendly where users with minimal computer knowledge and skills can still use it. Unless, developers have good ideas how to fulfill users requirements, learners may get frustrated and lose faith in e-learning.

In general, learners of all age are more motivated when they can see the usefulness of what they are learning and how they can relate it (Riva, 2001). But the shortage of course content can affect many learners opportunity. Most of e-learning systems are focused on particular subject matter where the contents are in English. A learner will certainly prefer multilingual courseware with choices of various subject matters.

4.0 Features of E-learning System

Lately, abundance of e-learning system can be found in the web, not to mention the CD-ROM based e-learning systems, which can be obtained easily in the markets. Unfortunately, not all the systems are perfectly created to adapt with the multi perspective of users. Though none of these flaws can easily be detected but in long term it may cause some unavoidable challenges. Therefore, developers should concentrate to the exploitation and strategies that influences a good e-learning model.

The planning stage in developing an e-learning system must be given strong consideration. It is where learning goals or objectives of the system will be determined, followed by the content decision, developing appropriate activities for the system and finally organizing and arranging the obtained information (Yang, 2001). Content plays a very important part in every e-learning system. That is what actually drives the system. In

a self-paced e-learning model, the content should be media-rich where the material sources are superior, new practices can be generated and its animation, exercises, questions and feedback can ensure a robust and engaging e-learning (Lori Mortimer, 2001). For easier enhancement, developers can come up with prototypes during the early planning stage where they can weigh the pros and cons of each plan.

Another important feature is the learning structure itself. The text and graphics used in e-learning layout should be revised for easier reading. In other word, the text structure should be simple and consistent for users (Goonetilake, 2001; Ferry, 2001; Hedberg, 2001). However, the layout and structuring needs to be adaptable to changes. Details such as hypertext, sound, font and color should be given careful consideration when designing e-learning systems. Features that can influence a good e-learning model are fonts, color, length of sentences, outline of subject matter, specific instructions, graphics, and clarify natural language usage (Hricko, 2000; Francis, 2001; Tang, 2000; Kanjilal, 2000).

Six basic design criteria that should be taken into consideration are (Uma Kanjilal, 2000):

- Accessibility – content must be information rich and access of the information should be fast and easy.
- Clarity – clarification of the language, information structure and visual representation are important for effective learning environment.
- Efficiency – content must be straightforward, instead of beating around the bush.
- Focus – provide appropriate linkages for deeper understanding and learner's attention should not weaver in the aim of achieving valued information.

- Consistency – the outline for e-learning course must be in consistent format.

- Flexibility – the structure of the subject matter must be flexible to encourage learners, where it can adapt itself to changes.

According to Vygotskian, design considerations must be based on situatedness, commonality, interdependency and infrastructure (Hung, 2001; Chen, 2001; Der-Thanq, 2001). Situatedness here means the environment in which learners can access learning through anyone, anywhere and anytime context. Whereas commonality is a situation where e-learning environment must have continuous interest and interaction for an engaging learning experience. Interdependency shows the self-paced e-learning environment is personalized characteristic to a learner where they can take their own time to learn without any pressure or hassle. Finally, the appropriate mechanisms and accountability structures used to facilitate the activities in e-learning are the infrastructure equipped in designing an e-learning system (Hung, 2001; Chen, 2001; Der-Thanq, 2001).

5.0 Conclusion

This paper looked into issues and challenges of e-learning concept and system. In issues culture considerations and policy perceptions were addressed. Culture issue is something that cannot be avoided in human civilization. As human progresses in his own world, culture differences tend to surface or are questioned. Like wise, the evolution of education to e-learning has also met few culture variances. Legal and policy perceptions also must be given strong reflection. These days, it is extremely hard to come upon standard policies to guide e-learning developers. Therefore it is not surprising when developers tend to create their own rule and regulations.

Challenges were tackled from the views of social and psychology aspects. Most of the time, e-learning is seen from the benefit view, not the opposite. But on the detriment view, one can see how this modern day learning can affect users in many ways. Hence, the future implication lies in the success of creating an enhanced e-learning environment with better features, which brings us to the final content of this paper where the features and criteria of a good e-learning model are exploited.

In spite of all these, e-learning has offered immense opportunities for efficient and effective delivery of a new learning method. No doubt that technology has made education and learning more accessible, more affordable, more convenient and of higher quality. E-learning has improve the education experience by letting users learn at their own pace, convenience, lower cost and at a self-paced training that allows individual to repeat sections without embarrassment. In conclusion, issues and challenges faced in e-learning is just another way to enhance virtual education.

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PROCEEDINGS   THEME 1   THEME 2   THEME 3   THEME 4

PERSONAL AND SOCIAL DEVELOPMENT IN PHYSICAL EDUCATION

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Abstract:

Lately, media has been reporting a number of cases that involves delinquent behaviours among adolescents. Many factors contribute to this depreciation in behaviour. However, most people attributed it to two prominent factors, i.e. modern technologies and working parents. Through modern technologies, like television and video arcades, adolescents were influence in both positive and negative ways (Robson, 1997). But the negative influence outweighs the positive influence. Adolescents need to be taught, controlled and corrected by adults (Bernstein, 1996). Adolescents need to be provided with opportunities and responsibilities to control and direct their own actions according to the acceptable and commendable rules and norms of society (Bredemeier, 1986). Due to the structure of physical education classes, it provides ample opportunities to develop positive behaviour. The objective of this paper is to determine whether humanistic physical education can be adapted to the physical education syllabus to improve adolescents' personal and social development. A quasi-experiment involving 146 students was conducted to see the effect of humanistic physical education on their personal and social development. It was hypothesised that the intervention program that uses the responsibility model would improve students' personal and social development. The hypothesis received significant support and recommendations of using specific teaching strategies to improve students' personal and social development were given.

Introduction

Of late, media reports seem to indicate that the moral behaviours of the younger generations today are deteriorating. Newspapers have been reporting about juvenile delinquencies almost daily. Things like absenteeism from schools are not so much

highlighted. Instead murders committed by teenagers, teen rape and gangsterism in schools are the focus of the day. Many factors contribute to this depreciation in behaviour. However, most people attributed this deterioration in behaviour to two prominent factors, i.e. the onset of modern technologies and working parents (Norlena, 2001).

Adolescents were introduced to television and video arcades through modern technologies. Television has been proven to influence adolescents in both positive and negative ways (White, 1990; Robson, 1997). The second factor contributing to behavioural problems in adolescents is working parents (Smith & Sharp, 1994). Since parents were at work most of the day, adolescents spend most of their time on their own or under the care of a helper. As a consequence, these adolescents frequently became the perpetrators and victims of undesirable behaviours. Adolescents need to be taught, controlled and corrected by adults. Good behaviours and instructions need to be given to children of all ages for them to follow as ideal examples (Bernstein, 1996). If children need to possess self-control and self-direction, then they have to be provided with opportunities and responsibilities to control and direct their own actions according to the acceptable norms of the society. As teachers what are we doing to help adolescents who spend most of their time in school, to act according to the acceptable and commendable rules and norms of the society we are living in?

Background

Schools are now under a tremendous pressure since parents are more worried about how their children perform in school, in other words, their children's grades in

school. Schools are giving more and more attention to the academic achievement of students. This increase in attention may be due to parental choice and competition among schools to be excellent in academic achievement. In such a climate, the future for other aspects of education is likely to be bleak. Time and enthusiasm spend on less measurable educational values are greatly reduced because schools and individual teachers are forced to focus their energies on "getting the scores up" (Norlena, 2001). Personal and social development is on of the aspects of learning that are currently under pressure. Although politicians and policy-makers alike know about the need for schools to take more responsibility for moral, civic and spiritual development of society's next generation, "what you test is what you get" attitude still prevails.

What is happening to schooling for the past several decades dictates the need of social skills training for school children. Teaching is a more difficult job today than it was in the past. Teachers, administrators and parents believe that students are more disruptive, more difficult to manage, and more in need of disciplinary training. Regardless of what previous generations of students were like, it seems clear that the current generation needs to learn to behave better in school as well as outside the school compound. Along with the widespread concern about disruptive behaviours, there is a related believe that schools should do more to teach students appropriate social and ethical behaviour (Inman, Buck and Burke, 1998).

There is also a long-standing belief that adolescents can learn valuable lessons pertaining to rules, authority, perseverance, courage, and responsibility through sports and games (Haft & Slade, 1989; Rayner, 1992). When physical education was introduced as a schools subject, character development occupied a significant role alongside physical

fitness. This shows that since it was first introduced, physical education was taught for fitness development and at the same time for the development of the self as a person. Over the years, it becomes more common to describe this objective as social/emotional development rather than character development, but the two essentially meant the same thing. Many physical education teachers place great importance on social development outcomes in physical education. However, many non physical education teachers argued that there is little evidence that school physical education has made any distinct contribution to character development in students. One reason for this lack of evidence may be that the development of character is seldom been approached as the major goal of a physical education program. If character and social development is just one goal among many, it is not likely to be achieved to a degree that it becomes noticeable. This study will provide some evidence giving physical educations teachers good reasons to believe that they can achieve personal and social goals such as perseverance, self-responsibility, more appropriate behaviour, sharing, and cooperation among troubled students and the general student population.

Objectives

It would be highly presumptuous to state that physical education will automatically produce good personal and social behaviour. Physical education can be beneficial, neutral or detrimental to personal and social development, depending on the nature of social interactions that actually takes place during a physical education class. The general aim of this study is to assess the effectiveness of using a model of teaching

personal and social development, i.e. the responsibility model. To achieve this aim two specific objectives of this study are:

1. to investigate whether there is any difference in the students' personal and social development before and after exposure to the responsibility model in teaching physical education; and,

2. to determine whether differences exist between gender in adapting to the responsibility model.

Physical Education and Personality Development

Physical education classes provide ample opportunities to develop positive behaviour. In a physical education class, the lecture-instructional method that is frequently used is inadequate because it is too abstract. Since personality traits are developed through experiences, participation in physical education classes provides an excellent laboratory for learning social skills. In the excitement of activities, the responses to situations are natural and spontaneous. How students respond to these situations or whether, as a result of these experiences, they develop good or bad behavioural traits depend to great extent upon how and what the physical education teacher achieve in his/her classes.

As students move from individual to group activities, they experience being part of a group. It is crucial that these experiences are satisfying as well as pleasant. Students must have a good foundation to build upon so they will gradually be able to confront more complex situations. It is must easier to establish positive behavioural patterns earlier than to break down bad habits later, in order to learn positive ones. This is why it

is important to include personal and social development as a major objective in physical education and to teach it like any other skills.

It is not sufficient to present a lecture on good sportsmanship, teamwork and cooperation at the beginning of the school year, or when a class becomes unmanageable. Developing desired social traits means students must be made conscious of the problem, think the situation through with the help of the teacher, and they must understand why some conducts are desirable and some undesirable. Thinking through daily moral situations to its conclusion, practising making judgements, and using practical experiences to make choices in play situations will give students the ability to meet and judge situations independently later in life. This is a gradual intellectual development that gives the reason for positive behavioural habits.

Physical Education and Social Development

Children occupy so much of their time and energy with games and physical activity. Therefore, these games and activities must serve some functional and evolutionary benefits. The hypothesised benefits of games as stated by Barnett (1990) range from the individual's cognitive, social, physical and/or emotional development to the general preparation of adult skilled action, the perpetuation of species, or the aesthetic appreciation of the world and its culture.

Friedrich von Schiller (1875) considers games to be the medium through which students could transform and transcend reality, thereby gaining an appreciation of culture and of the world. Vanderburg (1980) states that the critical benefit of a child's game or play is its contribution towards the child's thinking ability. Furthermore, Crase (1974)

indicates that participation in good physical education programs contributes to health and happiness, physical skill and emotional maturity, social competence and moral values. Competition and cooperation are important components of life and physical education can teach both, with 'fair play' as a bonus.

Teaching is a fundamental activity in any society. Men inform one another, conveying belief, knowledge, and skill as they go about doing their daily activities. As society undergoes industrialisation and modernisation, the education of the young becomes extensively differentiated, complex and elaborately connected with other features of the society. Therefore, formal education is an effort to do explicitly and systematically what family and community have long accomplished before society becomes so complex that the task has to be performed by specialist whom are called teachers.

Physical education is often seen as a fragmented, dictatorial series of skills and activities students perform to get a grade. Teachers appear to base content decisions for their classes primarily on their own convictions and their students' interests. There are no notions of sequential curriculum structure, goals, skill acquisition, assessment needs, and learning theories.

Teachers must understand the nature of physical education and its relation to sport and recreation, so that the subject can fulfil its potential as a medium of education for personal and social development. There is a growing awareness that sport, in its broadest sense, is one of the greatest weapons available to combat the growing number of social problems which exist today. Psychologists have had difficulty determining explicit links between involvement in sport and the various aspects of psychosocial development.

However, only a handful doubts that sport involvement has some impact on psychosocial development. Sport is a profound experience to which many children and adolescent devote significant time and energy. Such a concentrated focus of social interaction is bound to have an effect on its participants.

Sociologists were quick to point out the link between broader social values and those that seem to be nurtured in the world of sport. Instead of attempting to demonstrate that sport is a unique arena for developing specific attribute, sociologists tend to emphasize how sports is integrated with other socialising institutions, passing on the norms and ethics of a culture (Shields & Bredemeier, 1995). The existence of a relationship between sport and the broader society cannot be debated on. Values such as hard work, corporate loyalty, belief in hierarchical organisation, specialisation, meritocracy, and patriarchy are some of the social consensus that the function of sport can manipulate. These values and beliefs are necessary to maintain a compliant and productive workforce in the modern capitalist state.

Physical education uses many of the same activities as sport and recreation, but for a different purpose and with differing teaching methods and priorities in terms of outcomes. In contemporary elite sport, winning is all. In education this must not be the case. If the price for winning is bad behaviour, then, in the educational context, that price is too high. Physical education satisfies a need for activity and provides an opportunity for laying the foundations of a life long interest in physical activity. Therefore, it can be a medium by which many of the aims of education can be achieved.

Many teachers mention social development as an important benefit to be derived from physical education. Much of this value lay in the fact that during physical education

classes children are more mobile than in the classroom, and thus situations would arise which would not occur during the classroom lessons. It is a widely supported notion that because physical education provides a high degree of interaction to students, the development of positive social behaviour (prosocial behaviour) must certainly be occurring. Many social skills can be enhanced through participation in physical education classes, as stated by Dauer and Pangrazi (1986), 'physical education classes are a laboratory where children can apply skills in a meaningful way.'

Physical education provides an avenue where good social skills can be practised. It is important for physical education teachers to realise these opportunities and use it to help develop their students' personal and social skills. A survey by Williams (1983) shows that physical education is regarded as an important subject that can be used to impart useful knowledge other than those found in a textbook.

Physical Education and Behaviour Modification

Staub (1971) points out that because aggression is learned, it could also be unlearned or reconditioned. Teachers can encourage assertiveness and discourage aggressiveness. They can teach pro-social values and punish anti-social behaviours. They can modify stimulus situations and reinforcement strategies. Much of these have already been done without people being aware of it, and learning theory provides a more rational basis for modifying behaviour when that appears desirable. It is doubtful that teachers can so easily control much of human aggression, but they may find many instances where modification of stimulus situations may reduce aggressiveness.

From learning theory, it is known that much aggression is instrumentally learned. Such behaviour is influenced by positive and negative reinforcements, and the knowledge of instrumental conditioning allows teachers to view it in terms of the principles of acquisition, extinction, generalisation and discrimination. Individuals can be taught to discriminate situations when aggression is unjustified. Teachers can also increase inhibitions, decrease instigation, and assist in cognitive clarification. Such behaviour modification procedures are commonly applied to children at home but they can also be formalised.

There is nothing new about using instrumental conditioning to control behaviour. The only thing that is new is its deliberate application in new situations where the conditions are controlled and manipulated to gain maximum efficiency. Behaviour modifications are being practised without people knowing it, sometimes for the worse. For example, a parent may think he is teaching a lesson by punishing his child, but the lesson the child may learn is to mistrust the parent, to perform the act somewhere else, or to be punitive towards others. Since behaviour modification is constantly taking place through contingencies of rewards and punishments, it would seem wise to strive for beneficial rather than haphazard results. Pavlov (1927) originally describes another principle of learning, which he calls passive inhibition. Scott (1958) points out that resorting to fighting could also be habit forming. Rosenberg (1985) has also suggested that one way to minimise aggression is to emphasise non-aggression and to stress the more positive aspects of human behaviour. An example of this application is Mahatma Gandhi's principle of non-violence, which was also successfully used by the late Martin Luther King in the United States of America. By practising non-violence it is hoped that

an example for positive behaviour would be set and all the consequences of the use of force be rejected.

Combining the idea that aggression is habit forming behaviour and can be unlearned, and the nature of physical education classes which combines impromptu communication and movement, comes the idea of integrating co-operative learning skills into the existing physical education curriculum. By doing this, students will have the opportunity to practise and internalise social development skills, with the hope of producing students, in general and athletes in particular, with excellent social skills and sportsmanship.

Personal and social development occupy a central role in physical education because the gymnasium or the field, wherever physical education classes are held, as a place of high emotion and interaction, holds the potential for educating not only the body but the whole person as well. The attraction of physical activity for some young people also provides a "door-opener" to dealing with broader life issues. This notion of "life in the gym," with its potential for personal and social as well as physical development, is seen by personal and social development advocates as a way of helping students navigate through, or rise above, the escalating social problems.

Methodology

One hundred and forty six students from a school in Shah Alam, Selangor, Malaysia took part in this study. This school was selected because of the diversified backgrounds of the students. The subjects in this study represented four classes to which

they were randomly assigned during the beginning of the school year. The classes were randomly assigned to experimental (n=73) and control (n=73) groups.

The responsibility model (Hellison & Templin, 1991) which specifically focuses on teaching self- and social responsibility by empowering students to take more responsibility for their own bodies and lives in the face of a variety of barriers and limitations, and by teaching students that they have a social responsibility to be sensitive to the rights, feelings and needs of others.

The subjects attended physical education classes at separate times. Both groups of subjects, experimental and control, receives the same pre- and post-test measures. Each subject is given a questionnaire prior to and after the eight-week intervention program. The subjects were also tested on physical skills. The difference between the two groups is only in the way physical education classes were taught. The control group uses the traditional method of skill instruction with disciplinary action taken went needed. The experimental group uses traditional method of teaching physical education incorporated with special teaching strategies related to personal and social development. Data obtained from the subjects were analysed using ANOVA.

Results

From the total number of subjects involved in this research, 75 subjects were boys and 71 subjects were girls. The overall mean age is 13.13 (SD 0.30) years. The mean age for boys is 13.15 (SD 0.31) years and the mean age for girls is 13.11 (SD 0.29) years. Therefore the differences in age between the subjects are minimal.

Majority (110; 75.43%) of the students was involved in competitive sports; 46.65% at the school level or lower and 28.78% at the district level or higher. Out of the total number of students who were involved in competitive sports, 33 (22.60%) were involved in team sports only such as netball, hockey, soccer and 'sepak takraw' while 18 (12.33%) were involved in individual sports only such as athletics and golf, and 59 (40.5%) were involved in both team and individual sports. The remaining students (36; 24.57%) were not involved in any sporting activities.

A priori t-tests where α is set at 0.05 were conducted to examine the differences between the gain scores of the control and experimental groups for personal and social development. Analyses also included comparisons between the groups on life, sport and overall personal and social development scores. The first research hypothesis is:

Hypothesis 1: There is a significant increase in personal and social responsibility among adolescents in lower secondary schools in Malaysia after exposure to the responsibility model.

The analysis performed determines whether the research hypothesis is accepted or rejected. The mean gain scores in Table 1. Data was analysed using a one-way analysis of variance (ANOVA) to determine whether there were significant differences in the gain score of the experimental and control group.

Table 1: Mean Post-test Scores and Mean Gain Scores
of the Experimental and Control Group

	Control (n= 73)	Experimental (n= 73)

Inspection of the pre-test and post-test scores suggests that the students in both groups showed an increase in scores. The gain scores for the control group ranges from 5.61 to 11.73 while the gain score for the experimental group ranges from 11.13 to 23.33. The gain scores for all the categories were higher in the experimental group as compared to the control group. In order to test the significance of differences in gain scores between the two groups, ANOVA test were applied to the gain scores in each category.

The results of the ANOVA test applied to the gain scores are summarised in Table 2. The results indicated that there were significant differences between the experimental and control groups in the gain scores for combined dilemma $(F[1/145]=10.80, p < .01)$, life-related dilemma $(F[1/145]=4.93, p < .05)$ and sport-related dilemma $(F[1/145]=10.50, p < .01)$.

The results showed that the experimental group outperformed the control group in terms of reacting towards a dilemma either sports related dilemma or life related dilemmas. This implies that using a humanistic approach to the teaching of physical education could produce students who can react wisely to the dilemma.

Table 2: ANOVA of gain scores for experimental
and control group

Scores			Sig.
Combined	Between groups		.001
Life	Between groups		.03
Sport	Between groups		.001

Overall, the results of the ANOVA test applied to gain scores reveal significant differences for the combined dilemma, life-related dilemma and sports-related dilemma between the control and the experimental groups. Students exposed to the personal and social development in physical education obtained higher gain scores than students who were not exposed. The multiple regression analysis obtained similar findings. Therefore, results of the analyses accept the research hypotheses for the combined dilemma, life-related dilemma and sports-related dilemma as stated earlier.

In attempting to answer the research objective, it is clear through the analysis that was performed, students do benefit from the responsibility model. This is seen in the better and statistically significant scores the students obtained after the intervention programme was introduced to them. The control group that was not exposed to the responsibility model did not show statistically significant improvement in their scores.

Analyses were also performed on the data in order to determine whether there are any effects on the students' ability to response to sports and non-sports related dilemmas. Results of the analyses show that students in the experimental group showed statistically significant capability to response to both sports related and non-sports related dilemmas. Therefore, it can be concluded that the responsibility model do contribute in the students' ability to response to sports and non-sports related dilemmas.

Adaptation to the Responsibility Model According to Gender

The next analysis is an attempt to answer the second objective of the research, which is to determine whether differences exist between genders in adapting to the responsibility model. The gain scores according to gender for the control and experimental group are presented in Table 3 for each of the sub-test; combined dilemmas, life-related dilemmas and sports-related dilemmas.

Table 3: Mean gain scores according to gender for control and experimental group

	Control			Experimental		
Variable	*Combined*	Life	Sports	Combined	Life	Sports
Male	14.42 (23.92)	8.60 (16.04)	5.82 (11.67)	25.91 (16.93)	12.53 (13.23)	13.38 (9.46)
Female	8.96 (24.15)	2.53 (15.08)	6.44 (13.59)	20.53 (19.39)	9.62 (15.39)	10.91 (10.39)

A two-way analysis of variance was carried out. This analysis serves as a test whether to accept or reject the second research hypothesis, which is as follows:

Hypothesis 2: There is no significant difference in adapting to the responsibility model between genders.

In this analysis, one of the two factors was group and the second factor was gender, therefore this is a Group x Gender design. The results of the analysis of variance are presented in Table 4.

Table 4: Analysis of variance for the gain scores for the combined dilemma, life-related dilemma and sports-related dilemma in respect to gender.

Main effects and two-way interaction	d.f.	Combined		Life		Sports	
		F	Sig.	F	Sig.	F	Sig.
Group	1	10.68	.001	4.95	.03	10.22	.002
Gender	1	2.36	.13	3.29	.07	.24	.62
Gender*Group	1	.01	.99	.41	.52	.67	.41

The significant main effect involved the difference between experimental and control group in the combined dilemmas (F=10.68,p<.05), life-related dilemmas (F=4.95, p<.05) and sports-related dilemmas (F=10.22, p<.05). The significant group main effect is expected as a result of the intervention programme. Further inspection reveals that there are no significant main effects of gender in any of the responses to the dilemmas. Furthermore, none of the interaction terms involving the treatment variable was significant. Therefore the research hypothesis is accepted since there is no significant gender difference in adapting to the responsibility model.

To answer the second research objective, it is clear that, through statistical analysis, gender difference does not play an important role in adaptation to the responsibility model. In other words, male and female students are capable of responding positively to the responsibility model whose main purpose is to increase personal and

social development among the students. Therefore, the hypothesis that states that there are no significant differences in adapting to the responsibility model between genders is accepted.

Discussion

This research replicates the methodology and extends the findings of previous studies. It also adds some insights into the process of moral development through physical education. The Children's Summer Sports Programme study (Bredemeier et al. 1984) finds marginal differences in moral reasoning after a six-week programme using three intervention strategies (control, social learning and structural development). The Moral Development programme (Romance 1984) finds significant differences in moral growth in the experimental group after an eight-week programme using five intervention strategies (Built-in Dilemma/Dialogue, Built-in Dilemma/Problem Solving, Create Your Own Games, Two Cultures and The Listening Bench). The present study involves older children (13 years old versus 5 to 10 years old) and uses the Responsibility Model (Hellison 1984) which incorporates six instructional strategies (awareness, experience, choice, problem solving, self-reflection and counselling time). These strategies focus on keeping self-control, involvement, self-responsibility and caring so that these qualities eventually become possible choices in the lives of the adolescents both in and outside the playing field. Regular interaction with these qualities offers adolescents the option of incorporating them into their lives, but the choice ultimately rest with them.

The design of this research follows recommendations (Weiss and Bredemeier 1983) that research dealing with adolescent's psychosocial experiences in sport should utilise a development theoretical approach. The framework employed in this research is a

combination of the structural developmental theory of moral growth and humanistic physical education.

Physical education is a social construct, 'a selection from culture, which contains explicit and implicit values about appropriate missions, goals and objectives' (Dewar 1985; Evans and Davies 1986). Similar to other school subjects, physical education constitutes what Dewar nicely refers to as an 'ideological statement,' a way but not the only way of classifying, organising, legitimating and transmitting knowledge in society.

For physical education to positively affect a student's learning, it should be outcome generated. In other words, learning experiences should be selected for their potential to enhance psychomotor, cognitive and affective skills. One important affective skill is the development of positive pro-social behaviour. Providing opportunities for students to develop pro-social behaviours is a critical goal for physical education teachers.

Educational values encompass a variety of things. Besides the "paper chase" for academic development, personal and social development is also an element in educational values. The personal and social development of students refers to both the processes of development within students and to the outcomes of that development. Knowledge, understanding, skill promotion and attitudinal development are all of equal importance to build the leaders of the new millennium. Knowledge and understanding involves a focus upon several dimensions which include self, interpersonal, societal and global dimensions, all of which is interdependent. Skill developments in physical education not only involve motor skills but also interpersonal and social skills. With interpersonal and social skills comes critical and reflective awareness, all of which is

important for social development. Attitudinal development, which involves a positive disposition and behaviour towards self and others, are also important as it sustains values of compassion, fairness, justice and equality.

Despite a long and respected tradition, which probably goes back to Plato (1955), that there is an important relationship between a person's physical life and the development and formation of his or her character, it has been argued that sport is of no moral consequence and that it is therefore a 'non-serious' or trivial affair. This position about sport stems from the view that sport is discontinuous with the 'business of life' and when compared to life's concerns, it is morally unimportant and has no ethical value. In a word, it is 'non-serious' rather than 'serious'. This is not to say that sport cannot be taken or played seriously. The basis of the claim that sport is 'non-serious' lies not in the approach or attitude of the players towards what they do but in the view that sport is morally insignificant. Such a view about sport lies partially upon a misunderstood view of sport and partially upon a too ready assimilation of sport to the realm of play. Both issues are interesting as they not only affect the way in which sport is conceived but more particularly the position of physical education in the context of education and the place it occupies in the curriculum.

Consequently, while this model is not the only solution to personal and social development, it does offer an opportunity to ensure that personal and social development is taken seriously within the physical education syllabus. With additional research support and appropriate programme planning, physical education teachers can remove personal and social development from the hidden curriculum and deal with this important

objective formally. Once this is achieved, it will be right for physical education teachers to confidently admit, "Sports build character".

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COLLABORATIVE CLASSROOM USING COMPUTER TECHNOLOGY: IMPLICATION FOR BORDERLESS EDUCATION

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Abstract

This paper discusses the use of collaborative computer technology in expanding the traditional college classroom. The discussion was guided around several questions: (1) Why are new teaching techniques needed for students of higher institution? (2) Isn't the traditional teaching techniques enough to ensure academic understanding among the students? (3) Which teaching techniques will accommodate students curiosity in acquiring borderless knowledge? And (4) What are the implications of using the collaborative computer technology in college classroom? The article also discusses the JIGSAW method as a strategy that can be used in collaborative learning.

INTRODUCTION

Effective teaching and learning process emanate satisfaction among students and teachers alike. Regardless if one is a teacher in school or an instructor/lecturer in college or higher institution, satisfaction from the teaching process is only achievable when the method or teaching strategies used is able to commensurate between hard work from the teaching process and academic success achieved by students. As such, teaching strategies adopted by teachers or instructors can help trigger rippling effect of academic success among students.

Teachers, particularly those who are involved in academic world of higher institution, are always challenge by students' ability (or inability) to comprehend complex concepts from different rubric of knowledge. To add salt to the wound, many instructors do not undergo formal teaching program, thereby, making them short of teaching strategies to make teaching and learning at higher institution more commendable.

Hooks (1994) suggested that learning process comes easiest to instructors/lecturers who teach in a manner that respects and cares for the soul of the students. She also emphasized the importance of providing necessary conditions where learning can most deeply and intimately begin. Hooks (1994) suggestion can materialized, if instructors are willing to experiment with new and innovative teaching techniques and open their horizon to new approaches to teaching and learning. Forsyth (1997) indicated that as part of the paradigm shift from teacher-centered learning to lifelong learning, there is a need to change the way we think about education and training in the information age. Information sends to students from central resources controlled by lecturers or institution should be limited and replaced with information send through communication tool such as Internet. Inability on the part of the lecturers to change their teaching technique can lead to failure on the part of the lecturers as well as students.

The questions are: Why are new teaching techniques needed in teaching and learning students of higher institution? Isn't the traditional teaching techniques (examples: lecturing, face-to-face discussion and tutorial) sufficiently enough to ensure

academic understanding among the students? Which teaching techniques will accommodate students curiosity in acquiring borderless knowledge? What are the challenges lecturers faced in structuring course curriculum using new techniques?

This article will try to emulate the logic of using collaborative learning, a teaching technique commonly used among schoolteachers, into college classroom. Needless to say, the collaboration process will be discussed within the context of borderless education.

Why the Need for New Teaching Techniques?

The era of globalization spur information overload, since information can be downloaded from different sources regardless of its geographical location. However, the propensity of benefiting from the vast knowledge of information is limited when students are involved only in the traditional method of learning vis-à-vis learning using computer technology that promotes academic satisfaction among students of the new generation.

Traditional teaching method such as the talk and chalk technique, and classroom lecture, might only allow limited amount of information to flow from lecturers to students depending on the amount of knowledge acquired by lecturers. In a sense, teaching and learning only flows in a linear fashion (Grasha, 1997). The more knowledge the lecturer acquires, the more information will be disseminated to the students. However, human mind (in this case the lecturer) can only store certain amount of

information and this limitation can be very frustrating to students who constantly seek new information to meet their level of curiosity. Inevitably, lecturers need to adjust their teaching technique that involves the transfer of pedagogy from traditional to electronic or computer classroom. This might be the answer to new technique of teaching and learning in the era of globalization.

Why Collaborative Learning Through Electronic Classrooms (Internet)?

The expression, electronic classroom is sometimes applied to distance education classes that use computers. This paper will refer to a college course equipped with networked computers. The course should have collaborative learning, not individual learning, as the goal.

Curriculum developed for courses at college level normally involved deep understanding of knowledge beyond the textbook. Therefore, students need to find examples of concepts, strategies, process etc. to understand the topic being discussed. Students will then take longer time to accumulate and digest all the information. However, this problem can be overcome collaboratively which allows interaction between individuals. Each students can exchange information of topics with others thereby, shorten the time needed to accumulate the different information. Therefore,

collaborative approach to teaching and learning supported by electronic classroom can support a variety of topics and areas within a short period of time (Koschmann 1992).

What is Collaborative Learning ?

Collaborative learning is based on the idea that learning is a naturally social act in which the participants talk among themselves (Gerlach 1994). Smith and MacGregor (in Gerlach, 1994) suggested that the idea of collaborative learning is based on several premises. First, learning is an active and constructive process in which students integrate new materials with prior knowledge to create new ideas and new meanings. Second, learning depends on rich contexts that ask students to collaborate with peers to identify and solve problems by engaging in higher-order reasoning and problem solving skills. Third, learners are diverts and have different background and experiences. Fourth, learning is a social act in which students talk to learn. This social interaction often improves the participants' understanding of the topic under consideration. Fifth, learning has effective and subjective dimensions. Collaborative activities are both are both socially and emotionally demanding and most often require students not only to articulate their own points of view but also to listen to the views of others. These premises exude the idea of creative learning, Students work with others to create knowledge and meaning and do not have to rely solely on lecturers or textbook.

Collaborative learning promotes several skills that enhance intellectual as well as personal and social development. Miller, Trimbur and Wilkes (1994) suggested a

taxonomy of collaborative skills that is necessary to facilitate collaboration in college classrooms. The skills include: (a) interpersonal skills, (b) Group building management, (c) Inquiry skills, (d) Conflict Management, and (d) Presentation. The first skill, interpersonal skills is needed because students as social beings learn through interaction with friends and family and in social situations. These interpersonal skills includes getting to know someone's name, being a good listener, providing positive feedback, responding to people's ideas without making personal criticism, and using effective communication.

The second skill, group building/management involves students managing a variety of learning task, such as negotiating differences in perspective and arriving at consensus. Students must follow a specific agenda, keeping on the given task, making the datelines, showing empathy with the needs and problems of other group members, and discussing feelings about the group and the process.

Students need the third skill, the inquiry skills, to explore additional information, to analyze, synthesize and evaluate information and findings and draw conclusions. These skills are pertinent to seeking information from variety of sources. The skill will also enable students to evaluate information and the sources. Miller, Trimbur and Wilkes (1994) suggested that inquiry skill is not unique in collaborative classroom but is essential to the success of collaborative activities.

The dynamics of group work will trigger conflict among group members. As such, each group members will have to acquire effective conflict management. This is the fourth skill needed for collaborative learning in college classroom. Conflict arises due to several factors: incompatibility among group members, opposing needs, drives, wishes, or external or internal demands. Conflict in group work can also arise from personal issues such as some members not completing the task given, or disagreement over intellectual interpretation of some themes being discussed in the group. Conflict cannot be evaded but need to be resolve by group members productively.

The last skill needed is the presentation skills. This skills comprise of ability to organize, synthesize and summarize information so that others can understand. Effective presentation also require group members to speak in front of the group confidently while relaying the information accurately. Creating the right presentation materials is also essential in order for the larger audience to draw a conclusion from the information. Basic writing as well as speaking skills are important at this level.

There is a lot of flexibility in collaborative learning. It enables the lecturers as well as students to optimize their full potential in interacting with others. The strategy also enhances critical thinking at a much higher level where students are able to synthesize, and evaluate the accuracy of information and how the information impact their learning process. Concomitantly, students will also develop group management and conflict resolution skills. These necessary skills are illustrated in Table 1.

Table 1

Taxonomy of Collaborative Skills

Skills Category	Collaborative Skills
Interpersonal Skills	Congenial, friendly, make clear statement, listening skills, positive communication (no name calling, put-downs) and eye contact.
Group Building/Management	Organize work, keep group on task, run a meeting, participate in group self analysis, show empathy
Inquiry Skills	Clarification, critique, probe assumptions and evidence, probe implication and consequences, elicit view points and perspectives
Conflict	Prevention, resolution and mediation
Presentation	Summarize, synthesize, speaking in front of a group, creating presentation materials, report writing.

Source: Miller, Trimber and Wilkes (1994)

Collaborative Learning in College Classroom

Understanding collaborative learning concept will help lecturers to modulate their teaching activities. However, understanding the concepts alone is insufficient to run a successful course. What lecturers should be concerned about is, the most appropriate way of handling collaborative learning among college students. Various modes or activities represent collaborative learning. Such activities includes STAD (Students Team

Achievement Divisions), JIGSAW II, and TGT. These activities are more commonly used in school classroom and they involved class-based orientation.

Nonetheless, the writers feel that such activities, with some addition or modification, are still applicable to college classroom. Conceptually, the writers will adopt the JIGSAW II approach to collaborative learning for several reasons: (1) there is more interaction between students, (2) the activities involved are more structured, (3) students developed higher self-esteem because of their role as expert or leaders in their assigned topic, (4) students will receive positive reinforcement from lecturers which will then increase their motivation to learn, and (5) group cohesion can develop through individual and team assessment. However, the collaborative boundary exceeds walls of classroom and globalizes by the use of Internet and Intranet. This is in-line with the idea of e-village, and e-knowledge where learning is a global activity and everybody learn from somebody regardless of their geographical locations. This is what borderless education is all about!

What is the best collaborative technique for college classroom?

The writers would like to suggest the JIGSAW II approach when using collaborative technique in college classroom. However, the feasibility of using the approach lies on lecturers, students and information sources available. Conceptually, the JIGSAW II approach consists of a number of small groups with 4 to 5 students. The group will work together as a team to achieve the common goal or to solve a common problem. This

approach can be carried out in many ways. However, for the benefit of this discussion, the writer will suggest two most probable ways to handle the approach. The first method, is what we called intra-classroom collaborative interaction and the second method is inter-classroom collaborative interaction

Intra-Classroom Collaborative Interaction

Lecturer and students easily do this method from their own classroom. Students will be divided into small group (G1, G2, G3 and G4). Lecturer will have to prepare information-seeking exercise ahead of time. Assuming that each group has 4 members (M1, M2, M3 and M4), therefore, the students will be identified according to group and membership in the group. Table 1 shows distribution of group members according to their own respective group.

Table 1: Distribution of Group Members

	G1	G2	G3	G4	
M1	G1M1	G2M1	G3M1	G4M1	Expert 1
M2	G1M2	G2M2	G3M2	G4M2	Expert 2
M3	G1M3	G2M3	G3M3	G4M3	Expert 3
M4	G1M4	G2M4	G3M4	G4M4	Expert 4
	OG1	OG2	OG3	OG4	

OG – Original Group

At the beginning of the collaborative process, students will be grouped in their own respective group. At this stage, the lecturer will help to help the students form a very cohesive group. This is pertinent to the group success, particularly when sharing the

information gathered from other groups. Cohesiveness among group members can be developed through the following exercise:

1. Develop ground rules to establish some guideline on how the group should function.
2. Train the students with relevant skills (communication skills, leadership skills, listening skills, presentation skills, and social skills).
3. Appointment of group leader and task for each group members
4. Develop group motto and objectives

When cohesiveness among group members developed, the lecturer will assign a task to each group member (M1, M2, M3 and M4) according to the topic to be discussed (example different type of sampling process). Every members from each group will be given the same task (see Table 2). Concurrently, the expert group will be formed.

Table 2: Distribution of task among group members

Expert 1	G1M1, G2M1, G3M1, G4M1	Stratified sampling
Expert 2	G1M2, G2M2, G3M2, G4M2	Systematic sampling
Expert 3	G1M3, G2M3, G3M3, G4M3	Cluster/Block sampling
Expert 4	G1M4, G2M4, G3M4, G4M4	Snowballing sampling

Time frame of information seeking activities

Each group members will be asked to find information regarding the topic given. The students are encouraged to find information through the Internet, books, journals, thesis

and research reports. The information collection process should be exhaustive. Expert group members will interact accordingly in collaborative manner. Members should practice person-to-person interaction skill. Among the quality of interpersonal skill are sharing and seeking information, displaying creative and critical thinking and having an open mind as well as good of empathy towards any serious discussion at hand.

Interpersonal Collaboration via Internet

Having the interpersonal skills as the meaning suggests, is an ability to interact, understand, accept, and respond appropriately to people (Gerlach, 1994). This skill is the just the right skill especially in creating rich interaction among students and educators. On the contrary, collaborative teaching and learning is a process that involves outside parties to participate directly or even indirectly with university (and graduate students) in developing, distributing and sharing knowledge and information. These outside parties include the government and non-government bodies, public and private institution of higher learning and colleges and universities. Therefore, these graduate students have the opportunity to accumulate vast amount of knowledge from various resources. However, the accumulation of knowledge is easier if it is done via the Internet.

According to Forsythn (1997), Internet has the ability to provide access to information for everyone. He also suggested that Internet can offer possibilities to support alternative learning settings, and this is considered crucial for gradate students

because they are supposed to be well read and knowledgeable on their subject matter. The question is why do we focus on the use of Internet as the collaborative partner?

Graduate studies are demanding in terms of accumulation and sharing of knowledge from experts. These so-called experts are placed in various countries and regions. Therefore, it is impossible for the graduate students to have a face-to face contact with these experts. Immediate accumulation and sharing of knowledge can be done through Internet using various modes. Inevitably, global education system can be developed. This is cost and time effective in terms of knowledge accumulation.

Within the collaborative teaching and learning activity, the use of Internet is very useful when the students are given task to accomplish for a given time period. The students can use the Internet to find information related to the task given. This can be done interactively. As such, the interpersonal skills will be required for them to make contact with the information provider. This is very important since the graduate students are seeking information from an authority that they have not met. Furthermore, these experts might be working with different time zone and work setting. Without interpersonal skills, information gathering can be difficult.

Table3 shows example of interpersonal skills required during collaborative process and the internet tools that can help them acquire the information.

Table 3; Interpersonal Skills for Collaboration

Interpersonal Skills	Internet Tools	Example of Tasks
Socializing and interacting to others in a highly verbal way	1. Chat rooms 2. E-mail 3. Web Forum	Research design in different field of study (e.g. Medicine, business, education etc.)
Sharing and seeking information	1. Web pages 2. E-mail 3. Web Forums 4. Chat rooms	Global graduate classroom (e.g. developing instrument for mental status, work quality, EQ of individuals from different locality etc.)
Displaying creative and critical thinking	1. Web pages 2. Web forum	Electronic Publishing (to develop a web page reporting research projects)
Having an open mind as well as good sense of empathy towards any serious discussion at hand	1. E-mail 2. Web Forum	Tele-fieldtrips (visiting interesting research center, grants foundation, and visual expedition)

Collaborative process using the Internet tools

Collaboration over the WWW is made possible by different kinds of computer technology. One kind of computer technology is the computer-mediated communications (CMC) mechanism. CMC mechanisms allow users to communicate with each other over a network. There are two forms of communications: synchronous and asynchronous communications. Forms of synchronous communications include inter-Relay Cat (IRC), synchronous audio/internet phones and video teleconferencing while forms of asynchronous communications include e-mail and bulletin boards.

CMC systems allow learners to interact with one another over time. This time independence allows students to fit their on-line discussions around their other commitments and responsibilities. Different work patterns can be supported whilst still maintaining a feeling of community amongst the students and staff participating in the course. This is particularly pertinent where students are distributed around the world and potentially in different time zones. It has been found that CMC environments are particularly useful for students for whom English is not their first language. They can take the time to check their understanding without "missing" any comments as they may do in a face to face situation. They can also take their time to compose their replies without being under pressure as in a face to face situation.

Learning in a CMC environment can lead to deeper processing of material because time for reflection is allowed. Where in a more traditional model of support learners may only be able to communicate with their tutor about the subject material and their assignments, use of CMC can allow peer discussion to take place also. It is also possible to encourage students to use the CMC environment to coordinate tasks – breaking down a project into discrete tasks and using the CMC environment as a tool. Students can also be encouraged to collaborate on tasks –actually using the medium to achieve a share goal.

Web-based newsgroup and discussion groups are rapidly becoming popular. Newsgroup and discussion groups are essentially bulletin boards focused on specific

topics. Under this collaboration framework, the shared artifact is simply the topic under discussion. A support and discussion network was established using computer-mediated communications (CMC). This network allowed the groups to engage in electronic discussions and share on-line multimedia resources. The network was a good medium for students to share things, which they found of value, and to comment upon such materials. The collaboration was intended to promote the articulation and sharing of different viewpoints and contexts/cultural values that can aid "deeper processing" of information, concept refinement and active engagement in the learning task. In addition, the acquisition of computer literacy, information seeking, communication and collaborative working skills were objectives supported in this discussion.

Assessing Effectiveness of Collaborative Classroom

Collaborative teaching and learning strategies require constant assessment to gauged its effectiveness. The two types of assessment are assessment during process, and assessment of product. The first assessment can be conducted using periodic collection of work such as drafts, journals, reflections, and progress reports. These can help lecturers determine students' current status in their research project. Cramer (1994) suggested that some of the materials used in assessment will not require direct feedback from lecturers but can be checked of as a progress report. Cramer (1994) also suggested that the value of the assessment lies on the process of the work itself. Lecturers may also consider to have some kind of formative commentary, oral or written, before the project is completed

for formal grading. Progress data can help informed the lecturers where the students are going with their research project. According to Cramer (1994) such data is fluid or dynamic showing both the direction and the magnitude of change within the students.

The second assessment focuses on students' accomplishments and mastery in the course project. Students can be graded individually or in-groups. Cramer (1994) suggested that when the combination of grading are used, the assessment will be interwoven with the course materials. Inevitably, the assessment becomes more accurate.

The goal of assessment in collaborative graduate classroom is to attend to differences between passive and active learners. Therefore, lecturers and students must be knowledgeable with the assessment process. Students become more engaging in the learning process when they are actively involved in the assessment process.

Implication on Borderless Education

The use of computer technology in the teaching and learning process can implicate many challenges that need to be overcome by both lecturer and students alike. These challenges can promote positive or negative learning process. Possible challenges include understanding of how to manipulate the files. To ease the learning process, both lecturers and students must know how to read the files, develop new folders, retrieve files from neighborhood sharing, and develop attachment procedures to send files to others through

the Internet. If these skills are not acquired the students and lecturers will face difficulties in sending and receiving information from different sources.

The use of campus bulletin board also posed a possible challenge because the board is a public forum where the public can observe all interactions. Therefore it is difficult to control the information and confidentiality of the information is decreased. This challenge has ethical principle and legal implication and this might dishearten the students' involvement in pasting information on the bulletin board. However, there is a positive implication to the use of this board. Students will be able to share information and learn from each other continuously, promoting a lifelong learning.

The use of software can also posed possible challenge because students need to understand the tool being used properly. Ineffectiveness can occur when computer tools are wrongly used. Discomfort among students can also arise because comments are placed in the intertext for others to read. The peer critiques can be misunderstood and can lead to negative interaction (people stop interacting and changing ideas).

The paradigm shift in pedagogical context also requires complex adjustments and substantial rethinking of the ways in which classroom time is spent. Time for a traditional classroom is limited to the allotted time given for a particular course. Interaction between learners and knowledge disseminators runs only during that limited time and not beyond. However, for electronic classroom or computer-assisted classroom, the interaction expand beyond time and geographical boundaries. Students need more time to discuss in-

depth issues pertinent to their area of interest, particularly when they are involved in research. This is only achievable when the students have vast knowledge on the subject matter. Concomitantly, time is the factor that determines the amount of knowledge that these students can accumulate. The more time they have to interact and discuss with others on-line (example in the bulletin board), the more knowledge they will gain. On the contrary, the times spend looking for information can be time robbers for the students. Once the students navigate the Internet, they might be oblivious to the actual time. This can have negative effect where students might be deprived of their sleeping time or studying time making learning process a fruitless effort.

Traditional classroom also provides limited space for learning, i.e. within the classroom wall. Students can only interact among their course-mates and the lecturer who teach them. This space can only be expanded if the students themselves take the initiative to interact with people outside the learning boundary. However, computer-assisted classroom naturally provides the extra space for students to interact with individuals outside the classroom (within and outside the campus) via chat room, e-mail, on-line conferencing and video conferencing. This promotes diversity in knowledge gain and inevitably, will deepened their understanding on the subject matter. At the same time students will develop the necessary collaborative skills. However, this borderless space can be quiet intimidating because students will have difficulty finding the boundary of the knowledge (Forsyth, 1996). The navigational problems can also increase the students' anxiety from using too many search engine and finding no results.

Discussion and Conclusion

Collaborative teaching and learning transpired in school classroom. However, it is possible to expand it into college classroom. The possibility of using different collaborative partners aside from peer course mates, provide a different avenue in information seeking activities. One of the most prominent partners in this process is the Internet. However, the Internet per se is not interactive, thereby, reducing the possibility of developing interpersonal skill and social skill that is important in collaborative teaching and learning technique.

Lecturers who intended to use or to try using Internet as a collaborative partner will have to consider the most effective computer tools to optimize the use of Internet while not neglecting the interpersonal and social skills. Tools such as chat rooms, e-mail, and web forum are useful in helping students interact actively with their source of information and at the same time giving them the opportunity to develop and master their interpersonal and social skills.

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KNOWLEDGE AND PROFILE OF CRITERION SELECTION OF ASSISTIVE TECHNOLOGY

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Abstract

The enhancement of technology use today allows for increasing empowerment of individual's learning capabilities. In the case of learners with special needs, technology can be extended to them in the classroom through adaptation or modification in the form of assistive technology. For the special education teachers, knowledge on assistive technology is important. It provides them with information and means of how they can support their learners particularly in increasing their learners' learning capabilities. The aim of this paper is to discuss the findings of a preliminary study on assistive technology. The study aims to find out teachers knowledge on assistive technology and what are the criteria they may chose in selecting items of assistive technology. The participants (N=10) consist of special education teachers were interviewed on aspects related to assistive technology. They, then, were provided with a checklist of selection criteria for assistive technology. These preliminary findings show that knowledge on assistive technology relates and depends on the kinds of learners the teachers are working with. A profile of selection criterion was developed based on the degree of importance that the participants chose. The findings stress on that knowledge of assistive technology is important in promoting special learners' learning independence.

Introduction

The advancement and use of technology in classrooms can help promote learning and has positive pedagogical impact in the teaching and learning process. However, such advances are not being utilized in schools (Forgave, 2002) and particularly in the special education programmes many teachers are slow to recognise the benefit of new

technology to their students (Edyburn, 2000). In the special education context, the use of technology in the form of assistive technology allows for special learners to become independent as such technology are able to meet the requirements of these either individually or in groups (Manisah 2001). In the following sections, this paper provides some background on assitive technology and further discusses assistive technology in relation to special education. It also discusses the study carried out on identifying teachers' knowledge on assistive technology and the criterion used in selecting the technology to suit the learning needs of the special learners.

Assistive Technology:

In general, assistive technology means "any technology with the potential to enhance the performance of (*sic*) persons with disabilities" (Lewis 1998). The use of assistive technology enables an individual to increase or enhance his ability to perform the basic life skills which can lead to greater independence and hence, achieving a higher quality of life. It functions on two purposes which are building on individual strengths and compensating the individual's difficulties to enable him/her to better perform a given task (Lewis, 1998). Assistive technology includes all optical and non-optical devices, adapted materials, electronic devices and equipment which can help individuals with difficulties to develop and use their skills to the best of their potential (Lueck et al., 2002; Judge, 1998).

Assistive technology devices and equipment can be divided into the following forms or categories:

No technology	Any form of service which does not require the use of any equipments or devices. It can be in the form of services or systematic teaching
Low technology	Any form of devices which can be "passive or simple with few moving parts" (Judge, 1998). These devices may be cheap and easily found in shops like crutches, pencil grippers, Velcro strips or battery-operated toys.
Medium technology .	These devices use simple electronic mechanism like cassette players, simple calculators, books on tape and electric hole-punchers and staplers.
High technology	The devices in this form use high technology with a number of complex electrical components. Examples of high technology devices are powered mobility equipment (e.g. powered wheelchair), computers, speech synthesizers, and computer softwares

(adapted from Manisah, 2001)

Assistive Technology and Special Education

Ofeish et al. (2002) explain that the use of assistive technology within the special education context indicates a certain change in how educators view assistive technology.

They stress, previously, the usage of assistive technology is confined to the rehabilitation or remediation context for individuals with physical and sensory impairments. In line with this, there is a need for educators to understand how the increased use of assistive technology in the educational environment can empower special learners' learning. This understanding is important as usage of assistive technology in special education classrooms can help increase the functional level of learners with special needs. When the learners' functional level increases, their confidence level increases too (Manisah, 2001). This will allow for the learners to work independently and effectively as well as allows for cooperative learning to take place (Duhaney and Duhaney, 2000) and as a result, they are better able to participate in the mainstream classes (Lankutis & Kennedy, 2002).

The different difficulties that the special learners experience demand for specific approaches and usage of assistive technology in classrooms. Duhaney and Duhaney (2000) explain hearing impaired or visually impaired students may need differentiated pedagogical materials and students with learning difficulties benefit from very organized learning situations because of their limited cognitive abilities. No one particular device is effective to all learners. Educators should not based the use of assistive technology by the general characteristics of a specific type of disability. This is so because special learners experience different difficulties. Moreover, they have different learning needs, interest and experiences (Bryant et al., 1998). Therefore, the usage will be best suited if it is based on the functional limitations and characteristics presented by the special learners. This can help maximise learning and optimise potentials of these learners.

The Study:

The study highlighted here focuses on:

a. examining teachers knowledge on assisstive technology ;

b. finding out the kinds of assistive technology used in classrooms;

c. providing criterion selection of assistive technology devices based on degree of importance.

It is a preliminary study where 10 special education teachers were selected as participants.   These teachers represented the different special education categories in the Malaysian school namely, visual impairments, hearing impairments and learning difficulties.

The study was carried out in two parts. In the first part, the participants were interviewed individually based on the following aspects:

- usage of assistive technology in their classrooms;

- kinds of assistive technology used;

- teachers' involvement in devices selection, and

- provision of assistive devices in classrooms.

In the second part of the study, the participants were given a list of criteria for selecting assistive technology devices.   They were required to scale the list according to the degree of importance of each criterion.

The Results:

Part 1: The interview

Findings of the interview are provided according to the following aspects:

a. <u>Usage of assistive technology in classrooms</u>

All of the participants stated that they used one or more assistive technology device(s) in their classrooms.

b. <u>Kinds of assistive technology used</u>

The participants indicated different forms of assistive technology devices from no technology to high technology. The usage varies according to the different learning needs. Specifically, participants who taught learners with visual impairment pointed out that most of their learners used brailler and embossed learning materials in classrooms. Low and medium technology devices like magnifying glass and leaning notes on tapes were also among the frequently used. For learners with hearing impairment, the kind of assistive technology devices selected by participants for their learners varied from low technology like models to high technology like hearing aids and speech trainer.

c. <u>Teachers' involvement in devices selection</u>

Most participants described that their involvement in preparing assistive technology devices is mostly confined for use only in their classrooms.   However, one participant stated that he was responsible for advising parents of his hearing impaired learners on selecting hearing aids.   He was as well responsible for arranging meetings between hearing aids vendors and parents of his learners.   Another participant stated that he did not have any chance at all in material selection.

d. Provision of devices

Various parties contributed to the provision of assistive technology devices. The schools played a major role in providing the appropriate devices. Participants working with the visual and hearing impaired learners pointed out that other parties like private firms, non-governmental organisations and the Welfare Department provided contribution in the forms of high technology devices like hearing aids and computers.

Part 2: Criterion Selection

The findings (in Table 1) for this part are listed according to the degree of importance selected by the participants.

Table 1: List of Selection Preference for Assistive Technology Materials

Degree of Importance	Criterion Preference
1	Suitability
2	Safety Features
3	Mobility and Usability

4	Increase Quality Output
5	Cost
6	Functional Location
7	Accuracy
8	Freedom
9	Frequency
10	Life Span
11	Speed

Discussion:

This study provides information on teachers' knowledge on assistive technology. While assistive technology is mostly regarded as teaching aids by those who teach learners with learning difficulties, teachers of the visual and hearing impaired learners recognised that assistive technology functions in and out of their classrooms. It is suggested that for maximum usage of assistive technology, teachers of learners with special needs should be able to identify the functions or limitation of the assistive technology devices to be used by their learners. It is also important that the teachers can determine the kind of services available in related to the assistive technology devices used in the classrooms or by their learners. This is so in relation to usage of high technology devices like hearing aids. Concomitantly, documentation the effectiveness of employing assistive technology in their classrooms should also take place. The effectiveness of such usage can be determined by the increase of the learners' learning capabilities.

Selecting appropriate devices is another important aspect in using assistive technology in classrooms. Teachers have to be careful with the use of this technology. If this is not done so, it would lead to negative impacts. For example, learners with learning difficulties could not improve their attention span when there are too many procedures to be followed in using an assistive technology device. It is also important to note that factors like "changes in environment and task" (Zabala, 2000) would also affect the usability of these devices. As stressed by Abner and Lahm (2002), "to provide high-quality services and instruction", it is vital that teachers "be well versed in the selection and application" of assistive technology.

Conclusion:

Teachers knowledge on assistive technology is important to ensure that their special learners can be supported in the classrooms. It is also imperative that teachers are trained in the selection of assistive technology and other related aspects to enable them to provide appropriate guidance and assistance to their special learners. Usage of assistive technology in any form should be based on the teaching and learning process and as well as the long term learning goals of the special learners. It is suggested that, in order for extensive understanding on the role of assistive technology in the special education context, extended studies linking to the aspects like effectiveness of assistive technology with special education populations, functional needs and assessments are needed.

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ONLINE DISTANT LEARNING: A SURVEY ON THE KNOWLEDGE AND UNDERSTANDING AMONG LECTURERS. A CASE STUDY

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Abstract

Online Distant Learning (OLDL) that incorporates information and communication technology (ICT) is seen as an excellent alternative way in fulfilling today's education requirement. This method offers a flexible way of learning. It is also a way to enable the realisation of life long education concept. Academicians, particularly in public universities, are among those who receive early exposure to this method of education. Similar to other newly introduced concepts, various reactions pertaining to OLDL were received. This survey is carried out with the aim to seek for information about the perception on OLDL among lecturers at Universiti Teknologi MARA. This is particularly important as one of the factors that assure success to the implementation of OLDL is the lecturers themselves. The samples of the survey are lecturers at Faculty of Science, UiTM. From the suvey it was discovered that the lecturers' understanding on the characteristics of ONDL is high though their knowledge on technology is the reverse. They positively accept ONDL though they were a bit skeptical about its appropriateness and effectiveness. The implications of this study to the administratives and lecturers are discussed. Suggestions as to what future research should indicate are also made.

INTRODUCTION

Online Distant Learning (OLDL), as a technique and approach of learning is relatively a new concept in Malaysia. It is an innovative approach capable of handling challenge and

opportunity in this information age. This technique of learning is believed could have encouraged the acquisition and sharing of knowledge in society. It was reported that almost 75% of Institution of Higher Learning particularly in the USA, offer at least a programme via OLDL (Dixon 1996). There are also private initiatives and consortium offering various courses online. Such a competition has significant impact particularly in lowering the cost of OLDL and wider range of courses offered (Ludlow 1994). Also, OLDL offers better opportunity as students are able to make better choice to courses that are suitable to their requirement.

Advances in information and communication technology (ICT), has impacted our live including education. In Malaysia, Multimedia Super Corridor (MSC) is seen as a catalyst to the implementation of virtual education system. The OLDL programme as implemented by several local public universities is but an early stage of the realization of virtual education in the country.

In the past, most OLDL were dominated by the West (James 1996). These authors contended that such a situation is partly caused by incompetency in mastering other language particularly English. Thus, English proficiency becomes an advantage. Malaysian ought to be at least bilingual in order to be competitive and keep abreast with the latest development in the acquisition of knowledge. Before OLDL can be widely foster by institution of higher learning in Malaysia, the status of knowledge about OLDL amongst lecturers, their understanding and perception of the concept need to be known.

ONLINE DISTANT LEARNING

In Malaysia, OLDL is relatively a new approach in teaching and learning. Under this approach, students are free to adjust their time and determine the place of learning suitable to their life style and needs. This is in contrast to the conventional method, which require students to follow a determined timetable. Other than that, OLDL provides facilities and services including notes, additional reference materials, supports from lecturers and tutors interaction and discussion among students, either in groups or individual via computer and teleconference. What is OLDL? Stubbs and Burnham (1990: 27) define OLDL as:

> any learning situation where methods and techniques enabled by electronic devices combine with instructors and learners who are physically separated and who use methods and techniques enabled by electronic devices to transmit instructional messages over the distance between them is an electronic distance education system.

The aim of OLDL is predominantly to produce students who are computer literate and able to apply their knowledge both in learning and their life. They are capable of taking the challenge and opportunities especially when IT is concerned. Besides that,

the implementation of OLDL too could enhance the level of effectiveness in teaching and learning through the utilization of appropriate education technology.

One of the many facilities provided by OLDL is learning materials. These materials can be access via Internet at any time and places provided it has the access to Internet. These learning materials are such as assignments, exercises, pamphlets, learning guides, glossary and references to relevant web pages. Learning aids are also provided through telephone and facsimilies. Students interact online with lecturers, tutors and their fellow friends. Thus, respon regarding assignment, the receipt and submission of assignment, conferences and discussions are done online between both parties.

Research Problem

OLDL introduces new approach in education. The approach introduced attracts many parties. However, there is an important issue that should not be overlooked. First, the approach used in OLDL is different from that of Conventional Distant Learning (CDL). Second, the mode of interaction between the involve parties is also different. Regardless the type of distant learning, lecturers are regarded as the most important element. Rowe (1985:2) affirms that *"Every educational system must deal with three fundamental elements: the people, the methods, the plans. At the very top of this list, I have placed the teachers, because they are the key to all methods of education"*.

Advances in IT have changed the implementation of Distant Learning. Now OLDL requires the skill in IT. In relation to this, the university administrative ought to oversee whether the OLDL lecturers are ready to adapt themselves with these changes. What are their attitudes and perceptions, how do they cope with these changes, has these changes accepted, do these lecturers ready to undertake the changes, and do they understand the advantages brought by IT in handling distant learning? These are among the many issues that require prompt attention. The university administrative ought to know the lecturers' perception towards changes in academic environment before start thinking embarking on the endeavour.

Research Aim

This research seeks to find out the perception of lecturers on OLDL. It was also intended to seek for information on the level of IT usage among lecturers. For this research, perception refers to opinion or imagination in the heart or the thinking of the respondent towards OLDL and their level of IT usage. The aims of this research are as follows:

(i)   seek to find out the lecturers' understanding about OLDL.

Kamus Dewan (1994), describes understanding as "... the ability (afford) of understanding, understand or not (a person) of something he/she has learnt (by reading etc.)". In this research, understanding means how far lecturers have the knowledge about OLDL through reading and discussion. The first aim of this study is to find out whether lecturers understand OLDL by examining their knowledge about the characteristics of OLDL, the differences from conventional distant learning, and their level of knowledge

on OLDL. This is in parallel to a research by Black in 1992. He asserts that the high level of knowledge on distant learning among lecturers has positively influenced their attitude towards distant learning.

(ii)   seek to find out the lecturers acceptance towards OLDL.

Acceptance is "… attitude towards, assumption towards, approach" (*Kamus Dewan* 1994). In order to fulfill the second aim of this study, the attitude and the perception of lecturers towards OLDL need to be examined. This includes their attitudes and response about learning requirement, learning approach and readiness, interest, and confidence towards OLDL.

(iii)   seek to find out the level of IT usage among lecturers

Usage is defined as " … any action, activity and others using something" (*Kamus Dewan* 1994). In order to fulfill the third aim of this study, these authors investige the frequency of software usage and the level of information technology usage among lecturers. This is deemed necessary to indicate the relation between levels of IT usage with the perception of lecturer towards OLDL. Research by Heath (1996) discovered that there is a correlation between the high level of knowledge and usage of education technology with that positive attitude towards OLDL. Furthermore, the authors too would like know whether age, level of education, length of service and owning a computer influenced the level of IT usage among lecturers.

Research Target

This research is carried out on Public Universities in Malaysia that run OLDL. These authors specifically choosed Universiti Teknologi MARA (UiTM) as location for the research. There seem to be no other research that attempts to discover the perception of UiTM lecturers towards OLDL has been carried.

Furthermore, in another research by Phipps and Merisotis (1999) involving a review on more than 700 articles on OLDL worldwide find that, issues relating to lecturers is the least researched area when compared to administrative issue. Population for this research is lecturers from Faculty of Science, UiTM, Shah Alam, Selangor. There are 100 lecturers all together teaching various courses such as chemistry, physic, biology, mathematic, and computer science in the faculty. As there is no course in the faculty as yet offered through OLDL, these authors strongly feel that lecturers from this faculty are the most appropriate population for this research. This reaserch is believed to reveal the true picture of the level of understanding, knowledge and the preparedness of the lecturers who has not yet involve in OLDL.

Research Methodology

This research employed survey with questionnaire as its technique. The samples were drawn based on stratified sampling. The data collected was analysed both qualitatively and quantitatively. The nominal and ordinal data were analysed quantitatively using non-parametric test. The tests that were carried out are such as Chi Square and Spearman

Correlation. Despite that, percentage is also used to analyse the data. The data gathered from the unstructured answers related to opinion and suggestions were analysed qualitatively. SPSS was used for the data analyses.

Research Finding

It is important to find out whether this study fulfills its aims i.e. seek to find out the level of understanding among lecturers towards OLDL. The study reveals that majority of the respondents (90%) are aware that UiTM runs distant learning. Their source of information regarding distant learning is their collegues. This type of information source is the most popular compared to other type of sources particularly printed materials, electronic sources, seminars or workshops. Though UiTM had ran OLDL for 2 years, only 69% respondents are aware that distant learning has now runs online. This is not surprising given that the respondents' main source of information on distant learning is their collegues. As the result, there is possibility that they did not get the detail information. Such as claim is supported by the fact that only 62% of the respondents know the differences between conventional distant learning and that of OLDL. In addition, only 3% respondents had received training in distant learning officially. Interestingly, the lecturers' knowledge on OLDL is at the conscious state i.e. basically they know about OLDL but are ignorant on how and why it is implemented. The university administrative ought to take proper action to improve the lecturers' knowledge about such method. This is particularly important to ensure cooperation and better involvement in implementing such programme. Hall and Loukes (1979) mention that

lecturers' awareness about OLDL has a close relation with their involvement in distant learning.

This study found that the level of respondents' knowledge on OLDL is low. This reveals that lecturers need information from various sources such as printed materials, electronic sources and workshops. Thus, courses and practical training on OLDL need to be improved. This is in accordance with Hall and Loukes (1979) who assert that prior to making decision whether or not to adopt such technology, lecturers need to be aware both the advantages and the quality of that technology. Such an exposure, enable them to be positively adopting such technology (Kirby & Garrison 1989).

The research analysis too, discovered that lecturers' understanding about the charecteristic of OLDL is high though their knowledge about OLDL the reverse. This is a good indication to the implementation of OLDL at UiTM. As Clark (1993) suggests, lecturers are ready to adopt distant learning if they have the knowledge about it. By understanding the characteristics of OLDL would contribute towards the readiness of lecturers to handle the programme (Black 1992).

The second aim of this study is sought to know the attitudes and perception of the respondents about OLDL. The study reveals that lecturers are ready and are interested in implementing OLDL. This finding is in parallel with De Vries, Helford & Rugg (1998) who contended that there is a strong desire from the lecturers to undergo training appropriate to the implemention of OLDL. However, though lecturers' attitude is positive

towards OLDL, but the effectiveness of this teaching method is debatable when compared to the conventional ones.

Such critic occurs because of the following factors:

i.   Not all courses suitable to be delivered through OLDL

ii.   OLDL could not be used as a sole teaching method

iii.   No face-to face interaction

iv.   No trust on OLDL

v.   No understanding of the operation of OLDL

vi.   Minimum control on students by lecturers

Cummings (1995) had also identified these factors. The non-existence of face-to-face interaction and the lack of knowledge in handling students that are not physically attending the class is a hinderence to the implemention of OLDL.

These authors would like to suggest the appropriate steps required in implementing OLDL:

- Retain the direct interaction between teacher and students as suggested by Taylor and White (1991), Shireen et. al (2000) and Rockwell et. al (1998).

- Encourage lecturers to provide their teaching materials online

- Ensure security control in the delivery of teaching materials

- Provide computer facilities with Internet access. This will help students to access information faster and easier

- Provide interactive and easy to understand teaching materials.

These are additional steps to that already suggested by Gilcher and Johnstone (1988). They suggest that training on how to use the technology effectively, provide guideline to teaching strategy, and the knowledge in planning and organization management are important in implementing OLDL.

The third aim of the study is seeks to know the level of IT usage among lecturers. This is to indicate whether there is a relationship between ages, level of education dan length of service to that of IT usage.

This study also seeks to indicate the relationship between IT usage and owning of computer. The result shows that there is no relationship between owning a computer and the level of IT usage. This shows owning computer does not influence the level of IT usage among lecturers. The authors suggest that there are other factors influencing the level of IT usage as pointed out by Loyd and Gressard (1986), and Dupagne and Krendl (1992). They assert that the positive attitude toward computer has a positive relation to the level of usage. Thus, these authors agree that the positive attitude, knowledge and experience in using computer influence the level of IT usage. Therefore, the level of IT usage does not influenced by owning computer. Is is suggested that another study will have to be done to research these factors.

This study also finds that 63% respondents report that the level of IT usage is high. This means respondents are confident and feel comfortable in using IT. They are

able to use   various applications. Such finding is different from that of Adnan and Kamaliah (2000). It was also discovered that there is relationship between level of knowledge among lecturers pertaining to OLDL and the level of IT usage. This is similar to Heath (1996) that reports there is a strong relationship between knowledge dan technology usage.

The study also discovered that word processing is a popular software whilst database is less popular among the respondents. This kind of usage polar reveals that majority of respondents did not receive education in IT. Such finding is similar to that of Berenson and Stiff (1989) who suggest that word processing is popularly used by lecturers.

Analysis of the data reveals that there is a relationship between the levels of the lecturers' knowlegde about OLDL with that of the lecturers' preparedness to use such method. This finding is similar with that of Clark (1993). Clark suggests that lecturers are ready to use OLDL if they have the knowledge. This was also revealed by Heath (1996), Betts (1998), Rockwell et. al (1998) and Lillard (1985) who claim that there is a relationship between the positive attitude on distant learning and the level of knowledge about the matter.

From the research it is discovered that there is relation between the level of IT usage with that of the lecturers preparedness to use OLDL. Interestingly, Loyd and Gressard (1986) reported on the same matter. They contended that the positive attitude towards   computer technology has the positive relation with experience in using the

technology. Worries and uncertainty could be minimised by frequent use of technology. Summers (1990) argued that one of the reasons lecturers develop negative attitude towards technology is because they are not knowledgeable and has no experience in using it. The level of confidence among lecturers is seem to correlate with the frequent use of technology. Woodrow (1992) asserts that, the positive attitude of lecturers to computer technology will eventually help them to adopt the technology in their teaching. Based on this argument, these authors contended that the positive attitude towards OLDL is related to the level of IT usage among lecturers.

Implication of the Research

This research has a number of implications to several parties especially the university administrative. The implications are as follows:

i. Take appropriate actions to increase the level of knowledge about OLDL among lecturers. Lecturers need the correct information and appropriate training to gain confident in handling OLDL. They need to understand the methods and the aim of embarking the endeavour.

ii. Create conducive environment that encourage lecturers to get involve with OLDL. Such an environment will have to be created by first, identifying factors that motivate and second, factors that likely to hinder them from implementing such endeavour.

iii. Increase and improve the supporting and technical system. Weak supporting system deprive the implementation of OLDL (Betts, 1998; and Clark, 1993). Lecturers need to be given support in providing the appropriate teaching materials by identifying the types of education.

iv. Provides training and exposure on OLDL. Evidence shows that the success or failure in education depend on the level of skill and the commitment of the lecturers (Moore & Thompson 1990). The types of training need to be based on the OLDL model involved and the technology in use.

v. Examine and evaluate the suitability and effectiveness of the communication tools and applications as delivering media for OLDL.

vi. Provides appropriate method for evaluating lecturers' performance who involve in OLDL. Their work loads will have to be different from that of their colleague using the conventional method. The OLDL lecturers need more time in preparing and delivering their courses.

vii. Encourage research on OLDL. UiTM is not yet has the required information regarding its students, learning objectives, skill of both the lecturers and students, the effective training programme, and the instructional design suitable for OLDL. Irving (1995) asserts that research on OLDL should be encouraged to help the

success of shifting of paradigm in education from the traditional method to a system that encourages life long learning.

viii.   Lecturers in the Faculty of Science, UiTM, need to widen their knowledge on OLDL and keep abreast with current development in eduction that has now moved further to e-learning.

ix.   Provides a guideline on how to handle effective seminar on OLDL, and retained face-to-face interaction between the students and the lecturers (Nor Hapiza & Razidah 2001). This is particularly significant, as majority of respondents would like face-to-face interaction to be retained.

Some Suggestion For Future Research

Several suggestions are made for further research. These are:

i.   The population for this study is limited only to lecturers in Faculty of Science, UiTM. These authors would like to recommend that research in this area should be extended to a wider polulation embracing lecturers of UiTM on the whole. Thus, it could portray a better and comprehensive picture pertaining to the perception of UiTM lecturers on OLDL.

ii.   Research on OLDL should also be extended to students. The authors would like to suggest that a research involving several variables such as age, background, past

experience, interest, level of education, and student learning objective to be carried out. Such information could help the administrators of UiTM to identify the students' needs in OLDL. This will eventually attract more students to undertake OLDL.

iii. A research to indentify types of education, training, teaching and support to implement OLDL is necessary. These authors would like to suggest that respondent should be extended to all lecturers, be they involve in OLDL or not. This will help to distinguish the differences in the needs of those involve in OLDL with those who do not involve can be distinguished. Factors that both motivate and hinder them from involving in OLDL will also be identified.

iv. Further research regarding the impact of OLDL on the learning style of the students and the teaching style of the lecturers and how the technology affect learning, is also worth researching.

v. Factors other than age, level of education, length of service and owning a computer also need to be researched in order to identify the factors that contribute to IT literate among lecturers.

Conclusion

Dr. Mohd Nassir Lanjong, a lecturer from UiTM, in his speech stressed that: "… it is anticipated that this country will need between 16 to 20 universities or Institution of Higher Learning in order to achieve a fully industrialized nation by the year 2020"*(Berita*

Harian, 1991). His statement indicates that Institution of Higher Learning need to expand to cater more students and offer more learning opportunities. The information highway and the Internet changed the traditional teaching method. Teaching can take place at any time and at any place. The OLDL is seen as a way to realise such a concept. Thus, the basic knowledge of the lecturer and the strong support from the administrator are important in ascertaining the future and direction of OLDL. It helps the society to face competition in works and life in the era of globalisation.

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MULTIPLE INTELLIGENCE MULTIMEDIA COURSEWARE (MIMCO): A SELF-ADAPTIVE INSTRUCTION

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Matching instructions with individual's differences is a central and persisting issue in educational technology where technologists and educators try to create learning environments that comply with learners' differences in the way they perceive and process instructions. According to Corno and Snow (1986), instructional approaches and techniques that are geared to meet the needs of the individually different students are called adaptive instruction. One of the theories that focuses on the individual's differences is the Multiple Intelligence Theory by Howard Gardner (1983). The intelligences that have been proposed by Gardner can be defined as the ways individuals solve problems and learn/know about reality (Wahl, 1999). To apply the theory in Malaysian schools will involve substantial finances and expertise. One of the alternative media that can be used is through the use of computer-assisted instruction (CAI) or educational courseware. This paper will discuss an example of multiple intelligence courseware known as MIMCO (Multiple Intelligence Multimedia Courseware) and also its effectiveness in enhancing students' performances in learning. The students' perceptions about MIMCO will also be discussed in this paper. This research is a case study research and the respondents are form two students (equivalent to Grade 8). The courseware is developed for learning a topic of Statistics.

Introduction

Very recently studies have shown that every learner has his/her own unique approach of accessing information. These approaches are recognized as learning styles (Dunn & Dunn, 1987). All of us have our own learning preferences, which enable us to learn more effectively. When introduced into a learning environment that supports our learning styles, learning could be more efficient. As students do not learn in the same way, they cannot be taught in a uniform fashion. Therefore, it is important that a teacher considers students' learning style before learning takes place. Knowing how students learn will allow the teacher to produce instructions that favor their learning style.

Educators always try to facilitate learner's learning styles while teaching in the traditional classrooms where a one-to-many instructor/learner relationship takes place. To create many-to-one relationship inside the traditional classroom setting is difficult and has always been a challenge. The use of technology may be able to solve this problem by identifying the learners' learning styles before the design process takes place. According to Montgomery (1995), one way to reach students individually is through the use of educational software. Multimedia and computer software in general can go a long way to filling in the gaps caused by a dichotomy of learning and teaching styles. In addition, an awareness of the pedagogical needs of various learning styles can result in more effective multimedia software. According to Freedman (1998), multimedia is an effective tool to enhance learning because with visualization, sound, and interactivity, all learning modalities are involved.

There are many learning style models that can be referred by teachers or instructional designers in designing and developing any educational courseware. One of the learning style models than can be used is the multiple intelligence theory by Howard Gardner. According to Gardner, our schools and culture always focus on verbal-linguistic and logical-mathematical intelligence, which is not fair at all. Our school systems should place an equal attention on individuals who show their strength in the other intelligences such as the artists, architects, musicians, naturalists, designers, dancers, therapists, entrepreneurs, and others. Unfortunately, many children who have these intelligences did not receive much reinforcement in school. In fact, many of these children have been labeled as "learning disabled," "ADD (attention deficit disorder," or simply underachievers), since their unique ways of thinking and learning are not addressed by our school system.

Our school system should consider all the intelligences that individuals possessed by using many teaching styles and techniques. According to Dunn and Dunn, when teacher-teaching styles match student-learning styles, the students' academic performance will improved. The SUMIT (Schools Using Multiple Intelligence Theory) project by Gardner and friends from Harvard University also have showed that the intersection of multiple intelligence theory in the curriculum is regarded as the prominent influence in improved test scores, improved discipline, improved parent participation, and improvements for students with learning disabilities (Harvard Project Zero, 2000).

Therefore, in this research, the theory will be used to design the educational courseware (known as MIMCO) because according to Reese (2000), biologically, each of the intelligences corresponds to a separate, functional module in the brain.

The Design of MIMCO

Basically the courseware has nine different environments of learning Statistics. Eight of the environments are based on the learners' intelligences which are verbal-linguistic intelligence, logical-mathematical intelligence, visual-spatial intelligence, bodily-kinesthetic intelligence, musical intelligence, interpersonal intelligence, intrapersonal intelligence, and naturalist intelligence. The ninth environment (normal environment) is a learning environment based on traditional courseware.

Below are the design features of each learning environment:

i. Verbal-linguistic learning environment
    – personalize learners' perceptions through poetry, increase their feelings on learning, use of text as a medium, crossword puzzle activity, consider word origins and analyze word parts as terms are introduced, the use of learning problems with narrations.

ii.   Logical-mathematical environment

- teach inductively rather than deductively, work a concept backwards, turn single-step procedures into multi-step procedures with story problems, provoke exploration rather than telling, create disequilibrium and invite discussions.

iii.   Visual-spatial environment

- the use of visual as a medium, the use of mind map in presenting information, use of drawing activities, creating mind map activity.

iv.   Bodily-kinesthetic environment

- the use of drag-and-drop activities, exploration activities such as treasure hunt, the use of realistic problems such as role-play problems, the use of visual physical games such as sport activities, hiking and others.

v.   Musical environment

- the use of music while learning, problems based on songs, the use of clapping or singing, the use of sound-breaks of a few minutes of music between activities to rekindle tired energy and low moods.

vi.   Interpersonal environment

- the use of collecting data through virtual interviews, the use of cooperative learning techniques regularly, increase learners participation in group discussions.

vii.   Intrapersonal environment

- increase learners attentions on instructions, minimize their math anxiety, problems based on learners personal life, incorporate feelings or personality in learning Statistics, self-reflection activities, self-assessment activities.

viii.   Naturalist environment

- the use of natural objects in learning problems, problems based on natural processes or objects outdoors, analyzing plants/animals activities.

ix.   Traditional environment

- the use of normal "instruction-practice" method of learning, no drawing activities, no supporting learning tools.

The courseware begins with a multiple intelligence questionnaire that has to be answered by the learner. The courseware will generate the result of the questionnaire that will show the strongest intelligence that he/she has. The learner will decide whether he/she want to learn Statistics in a learning environment that mirrors his/her strongest

intelligence or other intelligences he/she prefer or learning Statistics in a traditional manner.

Since the courseware prepares all the possibilities of learning environments that the learners will prefer (based on the multiple intelligent theory), therefore it can be concluded that the courseware has the characteristic of providing adaptive instructions. This characteristic will increase the flexibility of the courseware so that it can be used by anyone.

Research Methodology

This research used a quasi-experimental research design type nonrandomized control group, pretest-posttest design as shown in Table 1.1

Table 1.1: Nonrandomized Control Group, Pretest-Posttest Design

Groups	Pretest	Treatment	Posttest
Treatment Group	Y1	X	Y2
Control Group	Y1	-	Y2

X=MIMCO

The samples of this study have been selected using a cluster-random sampling technique. Two classes of grade 8 students have been selected from schools in the area of Johor Bahru's district. The treatment group consists of 43 students while the control group consists of 42 students. Students from the treatment group learned Statistics by using

MIMCO while students from the control group learned Statistics through face-to-face instructions in the traditional classroom.

Instrumentation and Analysis of Data

Two types of instrumentations have been used in this study which are performance tests (pretest and posttest) and interviews. Data from the pretest and posttest have been analyzed using SPSS 10.09. Analysis of Variance (ANOVA) has been used to analyze the data to find out whether there is a significant difference between the performance of students in the treatment group and the control group. Besides that, data from the interviews have been analyzed qualitatively to find out which parts of MIMCO that really helps the students in learning Statistics.

Research Findings

Result from the ANOVA analysis has shown that there is a significant difference between the posttest of students from the treatment group and students from the control group ($p = 0.001$) at $\alpha = 0.05$. Table 1.2 shows the details of the ANOVA test.

Table 1.2: Result of ANOVA Test

Tests of Between-Subjects Effects

Dependent Variable: POS

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2097.841[a]	2	1048.921	44.198	.000
Intercept	10634.448	1	10634.448	448.105	.000
PRETES	1714.261	1	1714.261	72.234	.000
GROUP	291.958	1	291.958	12.302	.001
Error	1993.492	84	23.732		
Total	528885.000	87			
Corrected Total	4091.333	86			

From the descriptive analysis, it also shows that the mean of posttest of the students from the treatment group is higher than the mean of posttest of the students from the control group. With reference to table 1.3, the mean of posttest of the treatment group is 79.79 while the mean of the posttest of the control group is 75.59.

Table 1.3: Result of Descriptive Analysis

Descriptive Statistics

Dependent Variable: POS

Groups	Mean	Standard Deviation	N
Control	75.59	5.30	44
Treatment	79.79	7.71	43
Total	77.67	6.90	87

From the interviews, most of students said that the features of MIMCO that really help them in learning Statistics are:

1.   The multiple learning modes that the system has.

S1: For me, the best thing about the system is the variety of learning modes that it has. The modes really help me in learning the topic.

S2: I think is the modes of learning based on intelligences. The learning mode that I used, the discussion mode, really helps me in learning Statistics.

2. The facility or tool that allows them to draw graphs directly inside the system and they can save their drawing when needed.

S1: I like the tool that allows me to draw graphs directly in a computer. It gives me opportunity to draw my own graph.

S2: The drawing sections help me to improve my skill in drawing graphs

3. The video clips showing how to draw graphs step by step.

S1: The video clips trigger my mind where to start to draw a bar graph

S2: The video shows the steps in drawing a line graph and I can view it anytime I want.

S3: Even though the video clip is not showing how to draw a bar graph based on the given data, it gives me an idea how to create a bar graph.

S4: I assume the video clips as a teacher that always gives me an example on how to draw graphs.

Conclusions

The use of MIMCO or Multiple Intelligence Multimedia Courseware in learning Statistics has shown some enhancements in students' performances in this research. Students who used MIMCO to learn Statistics significantly gain higher performance in

the test compared to those students who learn Statistics through face-to-face instructions in the traditional classroom. In conclusions, MIMCO gives students a new way of learning Statistics.

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PROCEEDINGS   THEME 1   THEME 2   THEME 3   THEME 4

ENHANCING SCIENCE LEARNING USING INFORMATION AND COMMUNICATION TECHNOLOGY (ICT): A REFLECTIVE STUDY

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With the ever-increasing demand in knowledge and technological advancement, much emphasis has been placed on the application of Information and Communication Technology (ICT) in science education. This article aims to explore the constructivist approach in enhancing science learning using ICT. The strategies used have been adapted from the Children's Learning in Science (CLIS) model grounded on Driver's (1986) five phases of constructivist approaches and Novak and Gowin's (1984) metacognitive strategies. The authors' experience in the implementation of strategies and proposed planning of science lessons focusing on the topic "energy" are to be delineated. In the "Orientation" phase, simulation from CD-ROM was used to provoke learner's interest in the topic. During the phase of "Elicitation of ideas", learners are brainstormed on the various concepts and examples of "energy" using concept maps, which will then be transferred onto the Inspiration Programme software. Various active learning and explorative activities integrating ICT will be carried out during the phase of "Restructuring of ideas" to promote learning through clarification of ideas. The phase of "Application of ideas" will be adapted through investigatory activities, with the examples quoted on web-based learning in "Global Solar Unit", part of Science Across the World project. The authors had tried out the various stages with RECSAM's in-service training course participants and a reflective study will be reported with recommendations for future tryouts.

INTRODUCTION

In recent years, there has been rapid technological advancement in various fields and major emphasis is placed on the application of technology as tutors, tools or tutees in enhancing teaching-learning activities. With the ever-increasing demand in knowledge and technological development, the application of Information and Communication Technology (ICT) in science education has increasingly caught the attention of curriculum developers and implementors. This article aims to explore and make a reflective study on the authors' past experiences in using the constructivist approach to promote science teaching-learning activities integrating technology or ICT. An exemplary science lesson plan on the topic of 'energy' is delineated in the final section.

BACKGROUND OF STUDY AND RESEARCH METHODOLOGY

Technology based learning and other related concepts

There are various definitions and examples for technology-based approaches in enhancing teaching-learning activities. The commonly used technology in education includes word processing, powerpoint presentation, multimedia, Internet, simulation, spreadsheet and data logging through computer or calculator.

Basically, technology-based learning via computer has been defined as computer assisted/aided learning (CAL), computer assisted instruction (CAI) or computer based training (CBT). Simulation and modelling are important forms of CAL/CBT or educational multimedia programmes for learning. Nowadays, the term multimedia is often used instead of CAL, CAI or CBT because all educational software look like regular multimedia products (Min, R., 1998). Whereas, technology-based learning via calculator has been defined as Calculator-Based Laboratory (CBL) and Calculator-Based Ranger (CBR). The Calculator-Based Laboratory (CBL) is a portable, hand-held, battery-operated data collection device for collecting "real-world" data. Data collected with a CBL can be retrieved and analyzed by a graphing calculator. With the CBL and appropriate sensors, measurements can be taken for example, on motion, temperature, light, sound, pH and force (TI, 2000). The Calculator-Based Ranger (CBR) lets students explore the mathematical and scientific relationships between distance, velocity, acceleration and time using data collected from activities they perform. Students can explore mathematics and science knowledge as well as skills such as motion, graphing, functions, calculus, statistics and data analysis. With CBR and a graphing calculator, students can collect, view and analyze motion data without tedious measurements and manual plotting (TI, 1997).

All these technology-based learning devices have been classified under the recently defined term, Information and Communication Technology (ICT), which includes systems that enable the collection, structuring, manipulation, retrieval and

communication of information in various forms, normally via the use of computer and other technological devices.

Multimedia is one of the most effective ICT application in enhancing science learning. Pictures, graphics, video sequences, sound and text can be incorporated into packages to provide or present information which can be stored and accessed on a variety of media, e.g. CD-ROM, laser disc, video disc, and the Internet (multimedia on the web). An effective educational multimedia consists of the following features: (1) Objective and content (relevant, short and simple); (2) Presentation and effectiveness (gaining attention, cost effective, hyperlinks, etc.); (3) Interactivity and navigation (interactive activity/quiz, navigational tools, etc.); (4) Feedback as well as drill and practice (elaborative feedbacks, authentic questions, distractors, etc.).

In order to achieve the objectives of science learning using ICT, some practical procedures should be adopted as follows :

- Select the educational multimedia with good content and characteristics, relevant to the curriculum topics to enhance effective learning;

- Integrate the use of multimedia with innovative teaching strategies, such as cooperative learning, constructivist, metacognitive and other active teaching and learning approaches.

Teacher as researcher : The role of Action Research in the conduct of training courses

In view of the increasing needs of using ICT to enhance science learning, the authors had explored various technology-based science teaching and learning activities during in-service training courses conducted at RECSAM over the past three years.

In this reflective study, the Action Research approach will be employed to examine in-service training courses conducted which may serve as guidelines for future planning, implementation and evaluation of change through professional growth. According to Sumara and Davis (1997), action research is not merely a set of practices that teachers as researchers simply add to their existing practices; it is a way of organising and interpreting their life experiences which will lead to changes in their practices. The constructivist transaction of action research which includes the protocol of ***plan-act-observe-evaluate*** suggested by Henderson (1996) will be used as guidelines.

The study had been conducted on RECSAM's training course participants who are teachers or teacher educators from the SEAMEO region. Several science lessons were introduced using various strategies and approaches as well as ICT-based activities. The authors had undergone the process of planning, implementing, monitoring and evaluating the outcome of the courses. Apart from introducing Action Research Method as a subject in the planning of science lessons during the training courses, the cyclical process of ***plan-act-observe-reflect*** as suggested by Kemmis and McTaggart (1988) was also seen to apply in the design of curriculum or course content for teacher training programmes, as delineated in the following section.

Based on the authors' observation of the course output (which consists of participants' lesson plans or instructional materials, school tryout, interactive sessions during course activities, etc.), as well as participants' feedback during the course evaluation session, which served as the rich-data source for authentic evaluation, the authors were able to reflect on their own practice and make necessary changes.

Some assumptions were made prior to the trialling of the ICT-based lessons during training courses :

- In-service teachers with little or no ICT knowledge are willing to take the challenge of learning new technologies.
- Technology-based activities incorporating innovative strategies enhance the attitude, interest and motivation of in-service teachers to learn science and explore further knowledge.
- In-service teachers appreciate that the strategies used may assist them to learn better, and they are able to disseminate the knowledge and skills to their students and colleagues.

Several questions were raised for reflection of practice in the following section and it is hoped that the findings of this study would be of significance to :

- the lecturers for future planning of sample science lessons during in-service training courses.

- the teachers for future adaptation of lessons in their science classrooms.

LITERATURE REVIEW AND FRAMEWORK OF RESEARCH PROCESS

This section outlines more literature review and further details of research process. The main focus of the study was to identify the stage of lesson planning where ICT could be incorporated to enhance science teaching-learning activities in pedagogically rich environment so as to improve the participants' conceptual understanding of a particular science topic in a more comprehensive and practical manner. It was also hoped to improve participants' classroom participation and enjoyment in science learning through the implementation of a modified form of constructivist ICT-based science lesson.

Action research and ICT in science teaching were introduced as core subjects during the in-service teacher education programmes for the past three years (Ng, K.T., 1998-2002; Mohd.Nor, N., 2000; Ramli, A., 2001; Arellano, E., 2002; Abdullah, A.T.S., 2002). The participants were mainly practising classroom teachers and curriculum developers or officers with a wide range of pedagogical experiences and varied socio-economic backgrounds in the SEAMEO region. They brought with them various conceptions about teaching-learning with diverse background of ICT knowledge and skills. Some of them came with absolutely no knowledge of computers, while others may have some basic knowledge on word processing but not skilful as computers are not freely accessible in their own countries. Though some may be quite good in using the software applications, however they still lack an understanding of how ICT could be integrated in science

teaching and learning. The complexity of social construction of knowledge regarding teaching and learning was compounded when some of them were not proficient in the English language, which is the medium of instruction for training at RECSAM. Thus, the educational settings provided strong challenges for both the trainers and participants of the programmes. The authors found it to be a challenging task to impart knowledge and skills to these participants who were not only lacking in ICT skills but proficiency in English too. It was a situation well-placed for the practice of action research. For example, the present paper focuses on the case of integrating ICT with constructivist teaching strategies. The authors' concerns as teacher educators are :

i)   How can the participants be helped to shape a more comprehensive understanding of incorporating ICT in science teaching-learning activities?

ii) How can this understanding be achieved through the constructivist approach, e.g. by considering the prior knowledge of the participants?

iii) How could technology be used as tutor, tutee and/or tool in a pedagogically rich teaching-learning environment? and

iv) What are the various strategies in the constructivist approach that could be incorporated with ICT to enhance science teaching-learning activities and at what stage of the lesson should these be implemented?

A number of topics and strategies were introduced in the course content (see Ng, K.T., 1998-2002; Mohd.Nor, N., 2000; Ramli, A., 2001; Arellano, E., 2002; Abdullah, A.T.S., 2002). For example, "An introduction to ICT in science using various softwares or ICT-based activities in science teaching; Science Education via the Internet; Computer Assisted Learning; Assessment of Multimedia Courseware in the teaching and learning of Science; Computer education for the preparation of science projects : ICT graphics and Desktop Publishing (DTP) layout; Project/Problem-based Investigation; Science Courseware Evaluation; Computer Based Research and Analysis (COBRA); 5-Phase Constructivist Approach; Applying Action Research in the teaching of primary and secondary science; and *Intel Teach to the Future*.".

The participants were constantly requested to recall their prior knowledge and reflect on their own previous practice prior to the course (by answering questions in the pre-test) and the practicality or applicability of what had been learnt after the course (by answering questions in the post-test). Similarly, both participants and course supervisors or lecturers were also constantly reminded to undergo the "*plan-act-observe-evaluate*" cycle of action research. Main areas of concerns were identified to enhance science learning and there were possibilities of changing, modifying or abandoning the pre-planned activities to suit the training needs, during and after the course for future planning of course content, as suggested in the fluid constructivist planning protocol of action research proposed by Henderson (1996). At the end of the course, the participants were also requested to produce tangible course output as teaching and learning packages consisting of sample ICT-based science lessons for try-out and validation, as documented

in Ibrahim, A. et al. (1999); Omar, M.N. et al. (1999); Ng, L.Y. et al.(1999); Raja Saigon, R.J.et al. (1999); Chut, S.L. et al. (2000); Hj. Zailani, F.F. et al. (2001); Henry, A.O.C. et al. (2002); Toribio, M.B. et al. (2002); and so on.

Throughout the planning and implementation of the in-service training courses, the following areas were observed and found to be useful for the planning and implementation of future sessions :

1. When participants from different backgrounds worked together to produce teaching and learning packages, the empowerment of learning and peer teaching resulted in a sense of interdependence and support among them, which made learning more meaningful via the social construction of knowledge.

2. The lecturers or teacher educators who worked together with the participants were also able to construct and reconstruct the understanding of teaching-learning processes as well as the various strategies that suit different learning styles, according to the constructivist understanding of teaching that views knowledge being created in the process of constructing meanings (Henderson, J.G., 1996).

3. Several innovative ICT-based science learning were successfully incorporated at various stages of teaching-learning, following Gagne's 9 events of instruction (Gagne, R.M. et al., 1992, pp.11-12), for example :

- Interactive multimedia courseware which incorporates innovative graphics, video sequences, sound and text are useful stimulation tools for "gaining the attention of learners to ensure the reception of stimuli"(*event 1*) at the beginning of the lesson and "informing learners of the learning objectives, to establish appropriate expectancies"(*event 2*).

- According to Gagne, the prior knowledge of learners are important factors contributing to meaningful learning and this could be achieved through various constructivist learning tools or graphic organisers such as concept mapping. The visual presentation of such learning tools could also be achieved through the integration of innovative ICT to enhance the effect of learning, as it is important to "remind learners of previously learned content for retrieval from long term memory (LTM)"(*event 3*) and provide "clear and distinctive presentation of material to ensure selective perception"(*event 4*).

- Other important events of instructions, such as "Guidance of learning by suitable semantic encoding"(*event 5*); "Elicitation of performance, involving response generation" (*event 6*); "Providing feedback about performance" (*event 7*) and "Assessing the performance, involving additional response feedback occasions" (*event 8*) could possibly be achieved through the support of active learning and explorative activities integrating ICT, such as the use of multimedia and data logging with calculator-based laboratory or computer interface.

- In order to achieve the objective of "Arranging variety of practice to aid future retrieval and transfer" (*event 9*) as suggested by Gagne, several extended activities to enhance learning through the transfer and application of knowledge could also be achieved through data logging and innovative multimedia on the web, namely the Internet or web-based science investigatory project.

4. The above learning events were identified to be in concordance with the sequence of instruction suggested by the Children's Learning in Science (CLIS) model grounded on Driver's (1986) five phases of constructivist learning strategies incorporating Novak and Gowin's (1984) metacognitive strategies (such as the use of concept mapping to identify students' prior knowledge) and other active teaching and learning approaches in science (Windale, M., 2000).

Based on the authors' understanding and reflection on the experience in science teaching integrating ICT, it was found that science topics which consist of various sub-topics or sub-components could be taught in a more comprehensive way at various stages integrating ICT and other innovative strategies.

INTEGRATING ICT USING CONSTRUCTIVIST APPROACH AND OTHER STRATEGIES: SAMPLE SCIENCE LESSON PLAN

Current research into students' conceptions has many implications for both teaching approaches and curriculum design. This section discusses various models and strategies

that could be employed to plan lesson activities integrating ICT. Major emphasis will be placed on the discussion of constructivist views of teaching approaches, which stress the importance of shared meanings between teachers and students during the teaching and learning process.

The Children's Learning in Science (CLIS) model is developed by the influential CLIS group (Driver, 1986) based in the UK and is similar to the generative learning model. The following points are emphasised in this model :

- Learning outcomes depend not only on the learning environment but also on the knowledge of the learner. The knowledge of the learner can assist or can interfere with learning.

- Learning involves the construction of meaning. Meanings constructed by students from what they see or hear may be different to those intended. Construction of meaning is to a larger extent influenced by their prior knowledge.

- The construction of meaning is a continuous and active process. Children struggle to construct meanings about their world ever since they were born, and this process continues both in and out of school throughout their lives.

- Meanings that are constructed are evaluated by the learner; and may be accepted totally, accepted in a limited context only, or rejected.

- Learners have the final responsibility for their own learning. Thus, a teacher can never learn for a student, and teaching is never more than the offering of opportunities for learning.

- There are identifiable patterns in the types of understandings students construct, due to shared experiences with the world, and due to cultural influences through language. Thus, the conceptions uncovered in the literature tend to be common across a wide range of culture.

In the following section, an example of "a science lesson plan integrating ICT with 5-phase constructivist approach, metacognitive strategies (concept mapping) and active teaching-learning approaches (cooperative group investigation) in curriculum and co-curriculum enrichment activities" is to be delineated. The target group could be Form 1 secondary science students who will be exposed to the concept of "energy" and the various examples on the "conservation of energy". The estimated time frame of the lessons could be two periods (of 40 minutes each) and the third session could be carried out as two lessons (30-40 minutes each) or as co-curriculum/enrichment activities.

The social objectives of this lesson are the inculcation of values, scientific attitude, interest, motivation, effective communication and cooperative skills. Students should also be able to follow proper guidelines and measures of netetique while they surf the Internet.

The academic objectives to be achieved include the students' abilities to :

1. define and describe the various concepts and examples of 'energy';

2. understand the principles of 'conservation of energy';

3. illustrate the different concepts and principles of 'energy' with metacognitive tools using ICT;

4. follow instructions to plan, carry out investigation using data logger and science or ICT equipment;

5. compute the different energy values using spreadsheets (e.g. MS-Excel);

6. collect, organise and interpret data using ICT equipment;

7. surf the Internet and able to communicate findings with other schools using email as well as other web-based learning facilities;

8. assess and evaluate learning using proper evaluation tools;

9. summarize findings or learning outcome using ICT presentation tools (e.g. MS-Powerpoint).

The teaching aids required are CD-ROM entitled "Investigating Forces and Motion", Inspiration Programme software, spreadsheet (Excel programme software), Calculator-Based Laboratory (CBL), Calculator-Based Ranger (CBR) and/or computer interface data logger (using probe and sensors), experimental set for "Global Solar Unit" (The text for the experiment could be downloaded from the website http://www.solarpartners.org/ with Acrobat Reader 5), experimental set for "stored and kinetic energy" work card no. 3

and 10 (Windale, M., 2000), experimental set for "chemical energy" (different brands of yoghurts and milk desserts, etc.) (McFarlane, A., 1994).

The series of lessons will be carried out with the assumption that students have been exposed to the concept of the constructivist approach and metacognitive strategies. They have also acquired the skills in handling and manipulating data using computer, CBL and CBR in the previous lessons. Hence the detailed information on the constructivist, metacognitive strategies as well as computer literacy need not be elaborated further. However, brief introduction on the CLIS (5 phase constructivist) model could be outlined as below.

In the CLIS model, the steps in the teaching and learning activities are divided into a consecutive 5 phase lesson as illustrated in the following descriptions and schematic diagram :

Phase I : Orientation

During this phase, the teacher will provide an environment which is conducive to the prepared teaching and learning activities so as to motivate or attract the students' attention. The activities that could be carried out include showing a simple experiment or demonstration, some photographs or pictures, a short paragraph in an article, a brief simulation integrating the use of ICT such as CD-ROM, slide show or video clips.

Phase II : Elicitation or generation of ideas

Constructivist views emphasise the need to continually monitor students' views, to bring them into the open for discussion and evaluation in the light of evidence. The details of the teaching strategies will be influenced by our views of the status of these intuitive conceptions. During this phase, the teacher will encourage the students to exchange ideas in order to stimulate them towards re-examining their previous ideas. This could be done by having brainstorming sessions, roundtables, group discussions, concept mapping, or conducting simple experiments and reporting on what the students do in their respective groups.

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                                              ┌─────────────────────┐
                                              │     Orientation     │
                                              └─────────────────────┘
                                                        │
                                                        ▼
                           ┌─────────────────►┌─────────────────────┐
                           │                  │  Elicitation of ideas│
                           │                  │  (Generating ideas)  │
                           │                  └─────────────────────┘
                           │                  ┌─────────────────────┐
                           │                  │    Restructuring    │
                           │                  │      of ideas       │
                           │                  │ ┌─────────────────┐ │
                           │                  │ │ Clarification and│ │
                           │                  │ │     exchange     │ │
                           │                  │ └─────────────────┘ │
            Comparison with                   │ ┌─────────────────┐ │
            previous ideas                    │ │Exposure to conflict│
                           │                  │ │    situation     │ │
                           │                  │ └─────────────────┘ │
                           │                  │ ┌─────────────────┐ │
                           │                  │ │ Construction of │ │
                           │                  │ │    new ideas    │ │
                           │                  │ └─────────────────┘ │
                           │                  │ ┌─────────────────┐ │
                           │                  │ │    Evaluation   │ │
                           │                  │ └─────────────────┘ │
                           │                  └─────────────────────┘
                           │                  ┌─────────────────────┐
                           │                  │ Application of ideas │
                           │                  └─────────────────────┘
                           │                  ┌─────────────────────┐
                           └──────────────────│ Review change in ideas│
                                              │     (Reflection)    │
                                              └─────────────────────┘
```
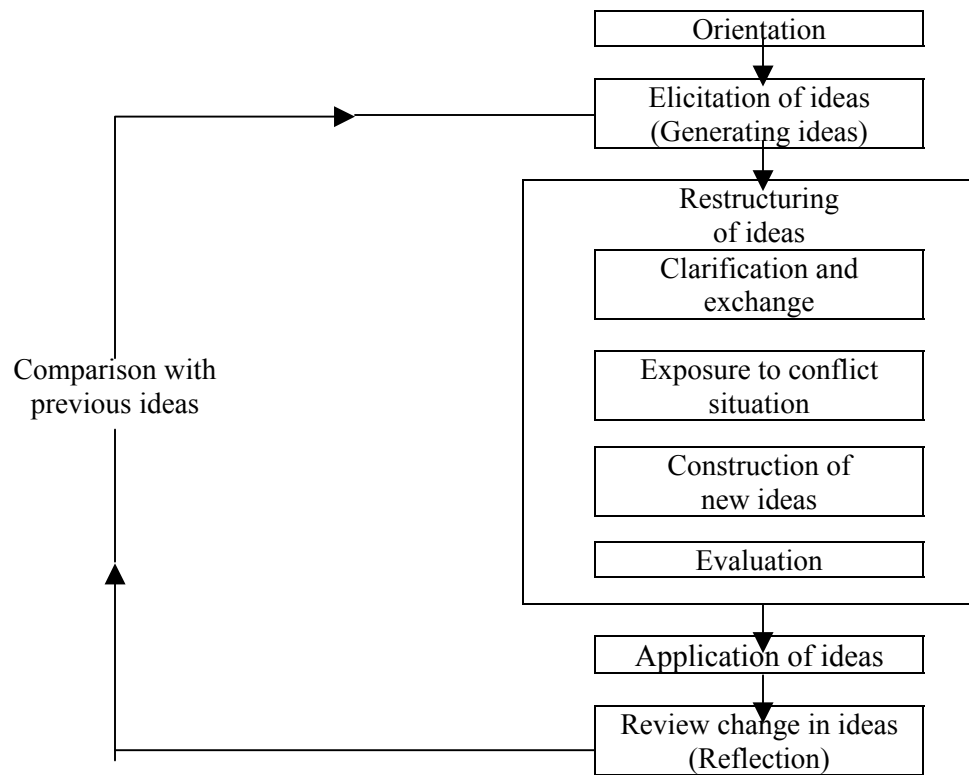
(Driver, R. and Bell, B., 1986; CLIS, 1987).

Phase III : Restructuring of ideas

During this phase, teacher will take the opportunity to prepare various teaching-learning activities that are suitable for helping the students to clarify and exchange ideas. They could be exposed to certain conflict situations, and thus given a chance to challenge, criticise, evaluate or change their original ideas or those of their friends. It is believed that through this method students will construct new ideas which are more acceptable and can be understood easily.

Phase IV : Application of ideas

In this phase, students will be given the opportunity to use their new ideas to solve problems and explain the phenomenon related to these ideas, possibly in different contexts. Various investigative and elaborative activities can be created in this phase to provide more in-depth studies on the topics to be researched.

Phase V : Review change in ideas or Reflection

At this stage, students will be required to make a comparison of their original and new ideas and to review or reflect on their learning processes. The activities that could be carried out at this phase include making a summary, writing ideas or opinion, discussing in groups or writing reports.

The following is the suggested sequence of events of instruction for the teaching of the topic "Energy" in curricular and co-curricular activities, adapted from the authors' past experience :

Phases of event *(time)*	Activities/Questions posed by		*Strategies/approaches and Thinking Skills*	*Teaching aids* /Materials
	Teacher	Students		
Orientation (5 minutes)	-Teacher to show the video clip on the CD-ROM to attract the attention and provoke students' interest in learning the topic.	-Students in pairs to discuss and describe what was shown on the screen.	-Simulation (ICT) -Think-pair-share -Observing -Communicating -Interpreting data	-CD-ROM
Elicitation of Ideas (30 minutes)	-Teacher to explain the procedures of concept mapping and instruct the students to make a comprehensive concept map with suitable linking words using the concept labels given. -Teacher to demonstrate the methods of using ICT to draw concept maps, i.e. by MS-Word or Inspiration Programme software.	-Students in groups of 4-5 to brainstorm their ideas and understanding on the various concepts and principles of 'conservation of energy' by writing the suitable linking words to inter-connect the concept labels and show the definitions or interrelation-ships among concepts. -Students take turns to draw concept maps via computer.	-Brainstorming -Team study -Concept mapping -Observing -Communicating -Classifying -Manipulating ICT equipments -Computer literacy	-Concept map labels -Mahjong paper -MS-Word or -Inspiration Programme software

Restructu-ring of ideas Step 1 (5 minutes)	-Teacher to assess the concept maps developed by the students together and identify any misconceptions.	-Students to carry out peer evaluation monitored by teacher, will modify their misconceptions, if any.	-Peer evaluation -Assessment -Observing -Communicating	-Concept maps printed from computer
Step 2 (25 minutes)	-Teacher to instruct students to hypothesise "The higher the runway, the …" before carrying out investigation to measure the distance the car travelled by changing the height of runway. -Teacher to demonstrate the use of Graphic calculator and CBR to interpret data.	-Students are to make a hypothesis on the distance a car travels down the runway before carrying out the experiment to test hypothesis. -Students to interpret data on the graphic calculator and compare the findings with their own graphs.	-Experimenting (Hypothesising, Observing, Communicating, Drawing graph, Controlling variables, Interpreting data) -Comparing	-Energy kit work card 3a -Experimental set (toy car, measuring tape, runway, etc.) -Graph paper -Graphic calculator and CBR
Step 3 (15 minutes)	-Teacher to provide students with different kinds or brands of yoghurt or milk desserts which contains labels on nutritional informa-tion. Students are requested to predict the energy stored in	-Students to be involved in explorative activities to survey the energy stored in food and clarify their understanding on "chemical energy". -They are required to	-Predicting -Observing -Communicating -Surveying -Measuring and Calculating -Comparing -Manipulating ICT	-Different brands of yoghurt or milk desserts -Worksheet -MS-Excel

637

	each brand and later make a survey using MS-Excel to calculate the actual amount of energy and compare with their own prediction.	pre-dict the amount of energy per portion stored in diffe- rent brands of food given and calculate the real amount using MS-Excel.	equipments -Computer literacy -Data logging	

Application of ideas
 	
Activity 1
 	
(20 minutes)
	-Teacher to instruct students
	  to make a band roller follo-
	  wing the instruction sheet.
	
	  Students will be instructed
	
	  to make hypothesis in terms
	  of e.g. "The longer the
	
	  length of the long rod, the
		-Students are to make a hypothesis on the distance
		
		of the band roller and later
		carry out an investigation
		to test their hypothesis.
		
		-Students are to explore
		
		  the use of CBR to collect
			-Designing
			-Hypothesizing
			
			-Observing
			
			-Controlling variables
			
			-Drawing graph
			
			-Manipulating ICT
			
			  equipment
				-Energy kit
				  work card 10
				
				-
				Experimental
				Set
				
				(elastic band,
				long rod,etc.)
				-Graphic cal-

Phases of event *(time)*	Activities/Questions posed by		*Strategies/approaches and Thinking Skills*	*Teaching aids* /Materials
	Teacher	Students		
	further or nearer it will go", etc	and interpret data.	-Investigating -Interpreting data	culator, CBR

Activity 2
(30 minutes)
	-Teacher to divide the class into teams with each team consisting of three sub-groups. Group 1 to make hy-pothesis before carrying	-Students to be divided into three sub-groups in each team. Group 1 is to make hypothesis prior to the investigation with	-Group investigation
			-Experimenting
			 (Observing,
			  Hypothesizing,
			  Measuring,
				-Computer with Internet access
				-Graphic calculator

	out investigation as illustrated. -Teacher to demonstrate the use of CBL (temperature probe) to collect data of the changing temperature of water. Group 2 will be instructed to interpret data and compare their findings with the findings collected from CBL and graphic calculator. -Teacher to demonstrate the use of Internet to enter data and exchange information using web-based learning activities via SAW website.	regard to the effect of the changing position of sun towards the length of shadow of the object. -Students to carry out investigation in three sub-groups (Measuring the Sun's position, Solar hot water and Measuring the Sun's energy). -They will compare their findings with the findings collected from CBL, later carry out web-based lear-ning to exchange infoma-tion with other countries.	Communicating, Collecting data, Interpreting data, Drawing graphs, etc.) -Manipulating science and ICT equipments -Computer literacy -Comparing -Data logging -Emailing	and CBL - Experimental set on "Global Solar Unit" (compass, map, meter ruler, plastic bottle, measuring jug, thermo-meter, graph paper, etc.)
Review Change in Ideas or Reflection (10 minutes)	-Teacher to discuss and sum-marize the students' under-standing regarding the topic. -Teacher to revise with students the MS-Powerpoint software and instruct stu-dents to present their sum-mary using MS-Powerpoint incorporating graphics.	-Students to summarize their understanding using various constructivist learning tools, graphic organizers and Clip Art. -They will transfer their learning onto the computer using MS-Powerpoint.	-Communicating -Graphic organizers -Group presentation -Manipulating science and ICT equipments -Computer graphic skills -Computer literacy	-Computer graphic (Clip Art) -Powerpoint

CONCLUSION

This reflective study has been carried out in an on-going basis over the past three years and will continue to follow the path of plan-act-observe-evaluate based on the constructivist transaction of Action Research. With more reflections and modifications made as time goes by, it is hoped that the inevitable constraints or limitations faced in the study will be minimised and the evidence of students' improvement in science learning integrating ICT will be more distinctive. According to the CLIS group in the UK, students need to be provided with opportunities to make their own ideas explicit, to share and clarify their ideas. An important aspect of learning will thus be to provide experiences which relate to students' prior knowledge and also give the students opportunities to extend their knowledge and make links between phenomena, with constant provision of experiences that challenge their ideas. ICT has been identified as one of the effective tools in recent years to extend the knowledge of learners through extensive research and interactive activities over the Internet. Nonetheless, students should also be allowed to gain confidence in trying out new ideas in a variety of contexts using diversified teaching-learning strategies integrating ICT. Students should also keep abreast with the latest technology and be aware of the various advances which could enhance their thinking skills, not excluding also being provided with opportunities for them to identify changes in their ideas. A supportive learning environment with pedagogically rich teaching strategies integrating ICT is the most appealing contribution for educators and learners in this technologically advanced era.

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OVERCOMING PHOBIA IN WRITING: DOES THE WORD PROCESSOR HELP?

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Abstract

The word processor is now a popular means of expressing one's thought onto paper. Many ESL writing instructors have, in general, agreed that the word processor seems to be a motivating force for writing. Word processing programmes encourage students to go through their writing process from generating ideas, text revising, pausing, reflecting, editing, and collaborating. As students go through their process of writing with the computers, they may adopt various strategies to ease their writing. However, many students still regard writing as a daunting task within an ESL context. Students encounter numerous language problems and many perceive the computer as a stumbling block in writing. This paper presents findings of ESL students' feelings and perception of writing with the word processor. It will discuss positive and negative feedback about writing with the word processor.

Introduction

Computers and Information Technology (IT) have affected our lives in many ways. The advent of technology has, for instance, revolutionised learning. In particular, the availability of computer programmes such as authoring and word processing programmes has facilitated learning. In second or foreign language learning classrooms, language instructors have employed such programmes: the word processor is one programme that

has been regarded a valuable pedagogical tool (Davidson & Tomic, 1994). In fact, the word processor is said to be a motivating force in helping students to improve their written English (Piper, 1987).

In Malaysia, the use of the word processor has become increasingly popular in higher institutions. Many students have mastered the word processing skills and many have benefited from using the word processor, for instance, in completing their academic assignments. The possibility of using the word processor in writing has given new challenges to ESL instructors, in particular, writing instructors. As we are preparing and producing knowledgeable and skilled workforce for the new millennium, it is timely that students be exposed to the use of the word processor in their language writing classes. Moreover, the literature of the past ten years provides endorsements of word processing as a pedagogical tool in writing (Maddux, et al., 1997).

Literature Review

Why use word processor in ESL writing?

Writing is an essential skill in learning. However, all of us know that writing is a laborious skill to master. To produce effective writing requires the students to go through a complex process: to express, restructure, and organise ideas clearly, economically, and effectively, whereby often, the task itself can be a solitary journey. Going through the writing process also requires them to critically think and evaluate ideas to complete the challenging task at hand. The lack of language competence makes the task more difficult for the ESL learners, as they have to produce writing, which is grammatically error-free, cohesive, and coherent. The word processing program is thus

seen as an ideal tool to increase the ESL learner's motivation and to help them during the various phases of the writing process; "...word processing programs of today support "bottom-up" processes for the mechanics of writing, such as spelling and word choice. This support takes the form of spell-checker, dictionary, and thesaurus sub-programs...." (Glynn et al., 1989: 4).

Such a claim is testified by the various endorsements that have been made about the advantages of word processing as a tool for teaching. Amongst the categories of the endorsements cited include ease of production and revision, cognitive advantages, social advantages, and attitudinal advantages (Maddux et al., 1997; Rosegrant, 1985). In fact, it has been pointed out repetitively that one of the greatest advantages of a word processor is that it "takes the drudgery out of composition" (Roblyer et al., 1988). Some good points emphasised in relation to this phenomenon are word processing:

- facilitates editing with the touch of a key and via its powerful editing capabilities (Dudley-Marling, 1985; Oliver, 1994)

- eases the physical requirements of writing and revising (U.S. Office of Technology Assessment, 1988);

- certain errors can be corrected without recopying every word (Geeisert & Futrell, 1995);

- allows young writers to develop their writing and language skills more readily (Brownell, 1992); and

- enables learners to increase the amount of time spent on being actively involved in the learning process (Vockell & Schwartz, 1988).

Other forms of support from word processing include overcoming illegible handwriting, conferencing about assignments, extending the length of assigned writing, overcoming fear of errors, and encouraging student collaboration.

Research on the use of Word Processing in Writing

The possibility of integrating word processing into writing has spurred many researchers to unravel its benefits and effectiveness in writing. This is evident in the accumulation of research conducted on this area in the last decade. Amongst the positive claims made by researchers concerning word processing are that it enhances students' "quality of writing, length of compositions, number and kind of revisions, and students' attitudes toward writing" (Bangert-Drowns, 1993; Roblyer et al., 1988; Silver and Repa, 1993). This paper, however, will limit itself to a review of studies on student attitudes toward writing using word processing and how it affects revision in writing.

Studies on effects of word processing have reported positive changes in student attitudes toward writing (Rodrigues, 1985; Kurth 1987; Collis, 1988; Montague & Foncesca, 1994; Poole, 1995). Rodrigues (1985), for instance, pointed out that there was a decrease in apprehension about writing amongst her basic writers. The students were also reported to be increasingly independent and confident in writing. This was envisaged as an important implication for students' future education. Kurth (1987) also reported a significant improvement in student attitudes toward writing when using word processing. In a review of various studies, Collis (1988) found that majority of them illustrate

positive attitudes toward writing using word processing. In general, we can tentatively conclude that word processing has had a positive impact on student attitudes toward writing. Peterson (1993) summarised that generally, research on student attitudes toward writing has come to the same conclusion, i.e. the use of computers makes writing more enjoyable for people of different ages and different disciplines.

On a different note, reviews of the research on the effects of word processing indicate that there is an increase in revisions, fewer mistakes, and more correction of them. Poole (1995), for instance, made the following conclusions about his review of the research on word processing and revising: motivation to revise was increased, more time was spent on revising, compositions were reread and revised more frequently and more readily, and final drafts were longer.

Despite the bulk of research on this area reported in the literature, a study on the use of word processor for writing among students in Malaysia is still lacking. A study of the role of word processor in the local context is timely, as the findings will assist the development of training programmes in the era of globalisation.

Purpose of the Study

This study focused on examining ESL students' perception of writing with the word processor. The research questions addressed in the study are:

1.   What are the advantages of writing with a word processor?

2.   How does the use of word processor help them in their writing process?

3.   Does the use of word processor help them improve their writing skills?

Methodology

Subjects

The subjects comprised seventy-seven final year BA English students registered in the Computer-Based writing course at Universiti Putra Malaysia. They were of intermediate to advanced proficiency level, representing the three major ethnic groups in Malaysia, Malays, Chinese, and Indians. Their age ranged from 19 – 25 years old.

Instrument

A two-page questionnaire was used to elicit data on students' perception of using the word processor in writing. The questionnaire comprises five questions, which required *Yes/No* responses and six open-ended questions.

The Writing Course

The course, *Computer-Based Writing*, was offered to the undergraduates majoring in English as a 4 credit hour elective in the November 2001 Semester. The contents of the course include teaching the students the various word processing skills, some of the more advanced techniques that can help them in their writing and taking them through their writing process using the word processor. Specifically, in this course, students had

hands-on experience during class hours and they were required to complete two assignments (a short essay and a short story, which requires collaborative work) using the word processor. They had to undergo various stages of the writing process before the submission of their final products with the help of the course instructor. In addition, another short evaluation on writing was also given in the form of an in-class word processing task.

Throughout the duration of the course, students were reminded not to worry about various issues pertaining to their writing process such as minor presentational errors and sloppiness that relates to ideas. However, they were encouraged to make the most effective use of the word processor such as working with multiple windows and the split screen facility, using the glossary/auto text as they proceeded in checking errors but using the spelling checker and the grammar checker at a later stage, and printing the document out from time to time so that they could view it as a whole. Besides this, students were also given consultation time for providing feedback on their organisation of ideas and language accuracy in their writing.

Data Collection Procedure

The questionnaire was administered at the end of the semester during class hours. At this point, the students had already completed the course. The researcher was present to clarify any questions raised regarding the answering of the questionnaire.

Results and Discussion

Table 1 shows the percentage of respondents' perception of writing using the word processor as compared to writing on paper.

Table 1: Students' perception of writing using the word processor

Statements	Percentage	
	YES	NO
Word processor helps them in their writing process.	96.1% (74)	3.9% (3)
Writing on computer is better than writing on paper.	94.8% (73)	5.2% (4)
Word processor helps in improving students' writing skill.	93.5% (72)	6.5% (5)
Word processor motivates students to write.	81.8% (63)	18.2% (14)

As seen in Table 1, majority of the students have positive perception of the use of word processor in writing. This is illustrated in the high percentage of responses to all the statements in the above table (96.1%, 94.8%, 93.5%, 81.8%). Specifically, it is encouraging to note that the respondents found that the word processor helped them in their writing process and in improving their writing skills. In addition, they also indicated that writing on the computer was better than writing on paper, and the word

processor also motivated them to write. Reasons given by the respondents include the following categories:

1.   editing purpose using tools such as spelling checker, thesaurus

2.   ease of formatting

3.   convenience of composing

4.   economical value – less time spent and less tiring

5.   enjoyable and motivating

A scrutiny of the reasons given for supporting their responses in fact illustrate that majority of the respondents felt that writing on the computer could help them edit their work. Some of the comments made by them are as follows:

"Because by using computer, I'm able to identify my grammar/spelling immediately and there are some suggestions to improve those mistakes...".

"It helps me to present my work (essay) neatly"./"I can write confidently because I can depend on the computer to correct my mistakes".

"It actually saves a lot of time and headache, instead of retyping, one can always cut and paste".

"I could easily copy and paste my work. I could easily change the vocabulary. I could easily import clipart. Could get help from Help menu and could understand more about the features".

"Editing would be much easier and we may know how many words has been typed by using the word count".

"Editing is much more easier and it can be done very quickly, as the grammar or spelling mistakes are highlighted".

"I can refer other page at the same time using split window".

Table 2 shows the respondents' perception of advantages of writing with the word processor.

Table 2: Advantages of writing with the word processor

Features	Percentage
Ease in Editing	50.6% (39)
Convenient, easy to compose	37.7% (29)
Economical, less time, less tiring	26.0% (20)
Neat, tidy, layout	9.1% (7)
Fun, interesting, motivating	6.5% (5)
Vocabulary enhancement	2.6% (2)

As displayed in Table 2, the majority of the respondents (50.6%) found that editing was the main advantage of using the word processor for writing. Quite a high percentage of respondents (37.7%) said that they found it convenient and easy to compose writing using the word processor. From the total respondents, 26.0% of them found that using the word processor was more economical; less time spent on composing and less tiring. In contrast, only 2.6% of the respondents found the vocabulary enhancement feature an advantageous tool in their writing. This is alarming, as although the Thesaurus is an important tool in vocabulary enhancement, yet a majority of them found no significant in its usage. This perhaps can be attributed to the nature of recommended words made by the built-in Thesaurus i.e. words recommended are sometimes not the one intended to be used in writing. Moreover, sometimes the Thesaurus does not recognise the words found in students' writing.

Table 3 illustrates the ranking of features of the word processor that helped students in their writing process.

Table 3: The rank of the features of word processor that helped in the writing process

Features	Ranking
Spelling and grammar checker	1
Formatting	2
Word count	3
Thesaurus	4

As shown in Table 3, the *spelling and grammar checker* was ranked first, followed by *formatting*, *word count*, and *Thesaurus*. This is not surprising, as majority of the respondents have pointed out that the ease in editing was the main advantage of using the word processor in writing, followed by the word processor providing "neat and tidy layout", "convenience" for composing" and is "economical". As stated by two of the respondents:

It's easy. The computer is equipped with an eraser (delete), scissors (cut), gum (paste), dictionary (spelling & grammar) and lots more which is very convenient – '**All in one**'.

"Because I can check my writing easily, easy for me to save it and... I can use all the features in the computer".

Table 4 presents the percentage of features of the word processor which respondents found most useful in their writing process.

Table 4: Features of the word processor which respondents found most useful in the writing process

Features	Percentage
Spelling and grammar checker	67.5% (52)
Formatting and editing	31.2% (24)
Thesaurus	15.6% (12)

As illustrated above, when asked about the features of the word processor which students found useful in writing process, a large percentage of respondents (67.5%) agreed that grammar and spelling checkers were the most useful, followed by formatting and editing (31.2%). The Thesaurus was again listed as the least useful (15.6%).

The fact that the spelling and grammar checker seems to be very popular amongst the respondents, reflect their ease in using the feature to help them in their writing, as pointed out by a few of the respondents: "... because if we do any mistakes, we can change it on the spot". Perhaps, the respondents also found it less intimidating to consult the built-in spelling and grammar features than their course instructors or peers. This tends to boost their confidence in writing as there is this "non-condescending mentor" assisting them in completing their writing tasks.

Table 5 shows the percentage of use of Information Communication Technology in students' writing process.

Table 5: The use of Information Communication Technology in student writing process

Statements	Percentage	
	YES	NO
Information Communication Technology helps in your writing process	92.2% (71)	7.8% (6)

As illustrated in Table 5, it was found that almost all the respondents (92.2%) showed positive attitudes towards the use of Information Communication Technology (ICT) in their writing process. This is encouraging. This shows that students are keeping abreast with the changes in the era of globalisation, which in turn is in line with the government's effort to produce quality, knowledgeable and skilled work force. Some of the comments made by the respondents regarding this technology include:

"I can get information, communicate with friends with just a click of a mouse. I do not have to leave the PC at all".

"It does help me in my writing process, as it helps me make my writings more impressive".

"Make me interested to write and use technology such as computer to create or finish work report, etc..."

Implications for Teaching ESL Writing

There are a hundred and one ways of using a word processor creatively. But, equally, it has been a struggle to wean students away from using a word processor as a glorified typewriter - i.e. you do all the writing by hand and then only use a word processor to type up a fair copy. This seems to be a waste of the power of technology.

Our experience in the Computer-Based Writing class indicate that despite the difficulties and tedious nature of writing, yet students were motivated to complete the writing task and they found the task less strenuous and enjoyable. Ideally, it is encouraged that first draft be written on the computer and saved so that editing can be carried out easily. Without a word processor, redrafting and revising are, for most students, tedious and difficult. Nonetheless, it needs mentioning here that some of the students did find that early thoughts and jottings were best done on paper - and perhaps best done lying in bed, under a tree or at the cafe but the word processor was still regarded by majority of the students as "useful and convenient". Some of the difficulties that students had when writing using the word processor include difficulty in identifying mistakes on the screen, lacking typing skill, and for better students--the reliability of the spell/grammar checker.

Conclusion

In short, the significant advantages of word processing are not only available exclusively to those who are proficient in the use of the hardware and software, but are also

accessible to those who are novice in the use of word processor and ICT. However, a stand-alone computer skills course (taught by the Computer Centre) may not be the best means to teach substantial knowledge of word processing. This is because examples and practices will inevitably be stimulated and artificial, and there will be little motivation to fully understand the applications taught. Since word processing is a tool that helps students in their writing process, perhaps it should be used, practised, and mastered in ESL writing courses. commands to delete, insert, copy, and move can naturally be taught as parts of instructions on editing and revision. Document saving, retrieval, and inclusion can be taught as parts of the writing process as has been demonstrated by our experience.

Revision, often ignored by students as too mechanical and painful, is now possible by pressing a few keys. However, computers do not change the central role of the teacher. If writing and revision can be made easier through effective writing instruction and word processing, then hopefully, students will begin to write because they enjoy it rather than because they are forced to do so. Moreover, as language instructors, we must keep abreast with this innovative pedagogical tool to enable us to consider integrating this technology in our writing classrooms.

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PROCEEDINGS   THEME 1   THEME 2   THEME 3   THEME 4

READING STRATEGIES AND EFFECTIVE COMPREHENSION

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Reading is an active process where a reader interacts with a text to obtain meaning. But it is a hidden process, as what goes on in the reader's mind cannot be observed by others. This unique feature explains why teachers are puzzled by their students' performance in reading comprehension tests. Why do some weak students in English perform well in a reading test while some others who appear to understand a text well do not? A teacher will not get the answer by conducting a reading test as this test only evaluates students' product of understanding. What is more crucial for the teacher to know is the process of understanding. Bearing this in mind, an exploratory study was carried out among 50 USM distance education undergraduates to examine how reading strategies, namely cognitive and metacognitive strategies, assist students when attempting a reading comprehension text. The aims were to gain insights into strategy use of students and how this is linked to reading achievement. Results indicated that cognitive strategies were used more frequently than metacognitive strategies. Strategy use was also found to be associated with reading achievement. The findings of this study offers implications to not only help guide curriculum development and pedagogical instruction, but also assist students at all education levels to become strategic readers. This could eventually lead them to be autonomous learners.

Introduction

Reading is an active yet hidden process where a reader interacts with a text to obtain meaning. Due to this, it is a difficult task for a teacher to know what makes a successful reader. Even a reading comprehension test would not provide the teacher with the answer as it only tests a student's comprehension. In other words it reflects the student's *product* of comprehension. But to know the magic formula of successful reading, a teacher needs to focus on the *process* of understanding. This knowledge of the *process* involves among others, the knowledge of strategies to process the text.

Reading strategies indicate how readers conceive a task, what textual clues they attend to, how they make sense of what they read and what they do when they do not understand (Block, 1986). Strategies, therefore, are of two types; cognitive strategies aid in bringing meaning to the text, a framework for understanding. These strategies involve more direct manipulation of the learning material itself (O'Malley et al., 1985). Metacognition, on the other hand, refers to the understanding of one's cognitive process. It is the cognition of cognition (Casanave, 1988). Hence metacognitive strategies assist in monitoring understanding, evaluating one's own learning process and taking action when necessary. It is imperative to note here that both cognitive and metacognitive strategies must not be thought of as discrete processes occurring in isolation; rather they represent different but overlapping processes that can and usually do function simultaneously (Wade and Reynolds, 1989).

Background of Study

Reading comprehension is one of the main components of the English proficiency programme for the undergraduates of USM. Although great emphasis is given to it, students' achievement in reading comprehension is dismal. Being L2 learners they have to cope with the demands of the second language and also the content matter. In other words, their problems can be detected at both the word-comprehension as well as the meaning-comprehension levels. This phenomenon is common even among students who obtained good English grades (A2 or C3) in their SPM examination. It is a cause for concern.

So this study investigates the role of reading strategies in reading comprehension among these students. It explores the types of reading strategies the students use when reading, and their frequency of use. It also attempts to investigate whether any link exists between strategy use and reading achievement.

Research Design

The 50 subjects of this study were undergraduates aged between 25 and 30 years. They were chosen as they had different English proficiency levels (based on their SPM English results).

Several tools were employed to gather information for this study. To assess the extent to which students used reading strategies, a closed questionnaire consisting of cognitive and

metacognitive strategies was developed. The Reading Strategy Questionnaire (RSQ) contains 20-items: the first 10 items are cognitive strategies while the other 10 are metacognitive strategies. It is a questionnaire with a Likert scale of 3 options. Students indicated the extent to which they use the described strategy by responding either a) Most of the time b) Occasionally and c) Seldom. As the strategies in the RSQ are adapted from various studies, a pilot test was run with 31 other undergraduates who were not involved in the study. After some minor alterations, the RSQ was administered to the subjects.

The RSQ was found to be a reliable tool as the Cronbach Alpha of the 20 items was .8456. Both the cognitive and metacognitive strategies were also reliable. The Cronbach Alpha of the former was.6325 while that of the latter was .8283.

An expository reading comprehension text entitled "Lessons of Chernobyl" was used to evaluate the subjects' reading proficiency. It was a text used for testing reading comprehension in the English examination. This text was chosen as students have both formal (text structure knowledge) and content (prior knowledge of the topic) schemata.

The S.P.M. English results were used as an external criterion to determine the validity of subjects' reading comprehension scores. It was found that they correlated highly with the SPM scores (r = -.6532) and was statistically significant at the 1% level. The correlation coefficient was a negative value as the reading scores were in a descending order while the SPM scores were in an ascending order.

Analysis of Data

The data analysis adopted in this study was based on a descriptive-analytical approach. To ascertain the strategies the subjects' employ when reading a text, the ratings for each of the items listed in the RSQ were computed into mean scores which were subsequently arranged in an order of frequency (as shown in Table 1). Mean scores between 2.2 – 3 indicate frequent use of strategies, those between 1.68 - 2.1 reveal the occasional use of strategies while those between 1 – 1.67 show that the strategies are seldom used. The results indicated that only 5 strategies were frequently used and among them, 3 were cognitive strategies. The most frequently cited cognitive strategies were *rereading*, *underlining* and *guessing meanings of unfamiliar words* while for the metacognitive strategies, the most frequently cited strategies were *self-questioning* and *taking corrective action*. A closer scrutiny of the results reveals that 7 out of the 10 metacognitive strategies fall under the least frequently used strategies. This shows that cognitive strategies are more frequently used than metacognitive strategies. The mean scores of strategy use are generally low; most are close to 2, indicating that subjects generally reported using these strategies only some of the time.

To determine the relationship between strategy use and reading comprehension achievement, the correlation coefficients for reading comprehension scores, overall use of reading strategies, use of cognitive and metacognitive strategies were computed. Results indicated a significant relationship exists between reading comprehension scores and overall strategy use ($r = .66$). A similar relationship can also be discerned when a

comparison of correlation coefficients was made between reading comprehension scores
and the use of cognitive strategies (r = .54) and metacognitive strategies (r = .66).

Table 2 shows the correlation coefficients for the use of the individual reading strategies
and reading comprehension scores that are statistically significant at p<.05 level.
Correlations that did not reach statistical significance were omitted. It is apparent that the
higher the use of metacognitive strategies (except for *questioning writer's purpose*), the
higher the reading comprehension scores. However the level of relationship is only
moderate as most of the correlation coefficients are less than .50.

Discussion

Subjects' preference for cognitive strategies could possibly be due to the fact that they
are more exposed to them. Many reading texts incorporate some practice in the use of
cognitive reading skills. But little prominence is given for metacognitive skills
Furthermore there is a lack of systematic instruction of strategies in the English
programme.   Preference for cognitive strategies is consistent with Carrell's (1989)
findings. Her subjects preferred cognitive to metacognitive strategies. Afflerbach (1990)
suggested that comprehension processes that are not automatic demand cognitive
resources. As many L2 readers tend to have obstacles at the word meaning level, they use
cognitive strategies to overcome them.

Closer examination of the results reveals that the subjects tend to use more 'local'
bottom-up cognitive strategies (i.e. *underlining* and *rereading*) than 'global' top-down

strategies (such as *relating ideas to prior knowledge*). This might be because the subjects are average achievers of English who face many comprehension problems at the sentence level (grammar, vocabulary). Therefore they use bottom-up strategies to overcome these snags. Only after they have overcome these problems would they attempt to apply the top-down strategies.

The correlational analysis indicates that the more often subjects employ strategies, the greater is their success in reading comprehension, and vice-versa. Only with complete understanding of a text would a student be able to answer its comprehension questions well. And to obtain full understanding of the text, he/she must use various strategies frequently. Baker and Brown (1984) attested to this. They reported that one difference between good and poor readers is their ability to use various strategies and to recognize when particular strategies are valuable.

It was also shown that the greater the use of metacognitive strategies, the higher is the reading achievement. A probable explanation for this is, in employing metacognitive strategies subjects not only regulate or monitor their comprehension but also evaluate it successfully. They might have miscomprehended a certain idea in the text, recognized this miscomprehension and taken corrective action to overcome it. This awareness and ability to manage one's own comprehension (that is the use of metacognitive strategies) would enhance reading achievement. Block (1986) stated that effective readers are able to monitor and adjust strategies according to their purpose of reading and the type of text they are reading; and hence perform well in a reading measure. Carrell's (1989) study

corresponded to Block's findings. She discerned that the use of metacognitive strategies positively correlated with reading performance. Good L2 readers favoured these strategies and were more aware of *how* they controlled their reading than poorer readers did.

Conclusion and Implications

This study reveals that the students involved in the study utilize cognitive strategies more frequently than metacognitive strategies possibly because they are more aware of them. The results also show that the more often students employ reading strategies, in particular metacognitive strategies, the higher is their reading achievement. In other words, effective utilization of reading strategies can ensure success in comprehension.

The findings, thus, suggest the importance of incorporating reading strategies into the English programme, in order to provide students with greater opportunities to make learning English an autonomous process. This calls for changes in the English programme where the focus should be on helping students to *learn how to read* by equipping them with tools they can use after formal education. Hence teaching students how to use strategies effectively should be a prime consideration in the English classroom. Teaching them that problems exist when reading and that there are ways of solving them may be more important than focusing on teaching the meanings of specific words, phrases and concepts. In helping students develop the ability to use strategies effectively, teachers may need to adapt their teaching methods to incorporate the

instruction of reading strategies. It is hoped that by these ways ESL readers would be

successful strategic readers and thus autonomous learners.

APPENDIX

Table 1: Use of Reading Strategies

Strategies	Type	Mean
Rereading	C	2.60
Underlining	C	2.46
Reading selectively	C	2.33
Self-questioning	M	2.33
Questioning own opinions about issue	M	2.23
Translating into native language	C	2.13
Taking corrective actions	M	2.08
Looking up the dictionary	C	1.83
Relating ideas to previous knowledge	C	1.79
Guessing meaning of words	C	1.75
Checking sequence of events	M	1.63
Questioning reactions towards text	M	1.63
Checking for fair presentation of issue	M	1.56
Checking for consistency	M	1.54
Making notes	C	1.38
Predicting outcomes	C	1.33
Taking note of problems during reading	M	1.19
Planning	M	1.15
Questioning writer's purpose	M	1.10
Imaging	C	1.08
Overall use of cognitive strategies		1.87
Overall use of metacognitive strategies		1.64

*C – Cognitive Strategy
 M – Metacognitive Strategy

**Table 2: Relationship between Reading Strategies and Reading Comprehension
  Scores**

Reading Strategies	Correlation Coefficients
Cognitive Strategies:	
Guessing meanings of words	.3418**
Underlining	.3864**
Predicting outcomes	.2922**
Relating ideas to previous knowledge	.3970**
Looking up words in the dictionary	.3820**
Making notes	.3335**
Reading selectively	.3488**
Metacognitive Strategies:	
Questioning own opinions on issue	.4861**
Taking corrective actions	.3684**
Checking sequence of events	.4022**
Self-questioning	.4259**
Questioning feelings towards text	.4947**
Checking for consistency	.5043**
Planning	.5201**
Making note of problems while reading	.4192**
Checking for fair presentation of issue	.2953**

**p<.05

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HINTAGENT : A WEB-BASED TUTORING SYSTEM THAT PROVIDES ADAPTIVE HINTS USING ANIMATED PEDAGOGICAL AGENT

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Abstract

Hinting is a general and effective tutoring tactic when student has trouble solving a problem or answering a question. In many student oriented tutoring systems, the machine tutor will give hints when the student asks for help, e.g. Andes (Gertner et al., 1998). However, majority of the systems consists of static hinting strategies that are non-interactive and non-adaptive (Brusilovsky, 1998). The student only read the displayed static text and the same hints are presented to every student without considering their level of understanding. Due to that, this paper described **HINTAGENT**, a research prototype for web-based educational system that provides adaptive and interactive hints to student. The aim of this research is to propose a model for providing adaptive and interactive hints by using animated pedagogical agent that offers interactivity and adaptability. This prototype system will focused on the exercise part of Data Structure and Algorithm Analysis subject such as stacks, queues and binary tree. The agents enable different hints to be presented to every student based on their level of understandings as stated in the pedagogy technique. This agent also offers great promise for broadening the bandwidth of communication between the system and user, and increasing the ability of the system to engage and motivate student (Johnson et al., 2000).

1.0 Introduction

Hints are useful and common pedagogical tactic, particularly in one-on-one tutoring sessions. Hints can activate otherwise inert knowledge making possible its recall, or to stimulate the inferences required to complete a task using knowledge thought to be available to the student (Hume, 1996). Hints can either explicitly convey information to the student or they point to information presumed to be available to the student. More specifically, Hume (1993) defined a hint as a rhetorical device that is intended to either:

a) Provide the student with a piece of information that the tutor hopes will stimulate the student's recall of the facts needed to answer a question.

b) Provide a piece of information that can facilitate the student's making an inference that is needed to arrive at an answer to a question or the prediction of system behaviour.

In many students oriented tutoring systems, the machine tutor will give hints when the student asks for help such as **Andes** (Gertner et al., 1998). However, majority of this system consists of static hint that are non-interactive and non-adaptive. The student reads the displayed static text only and the same hints are presented to every student without considering their level of understanding (Brusilovsky, 1998). In addition, according to Tiffin and Rajasingham (1995), in the classroom system, a learner can easily get a

teacher's attention to solve problems and provide assistance such as hints as shown in Figure 1.

Figure 1: Classroom Learning Session

However, this assistance is only possible during class time. One suggested solution involves the use of a virtual teacher. The virtual teacher was not a teacher at all but an autonomous, intelligent agent. The learner is able to get their learning at exactly the time they need it. Therefore, the primary objective of this research is to develop a web-based learning system model that provides adaptive and interactive hinting using animated pedagogical agent. Animated pedagogical agent is an animated character that facilitates interactive learning in computer-based learning environments. The primary function is to support human in accordance with the application pedagogical theory within learning environments. The use of animated pedagogical agents can make the learning process more lively and appealing (Johnson *et al*., 2000). Our prototype system focused on the exercise part of Data Structure and Algorithm Analysis course covering stacks, queues and binary tree topics.

2.0 Intelligent and Animated Pedagogical Agent

Intelligent agent is a new class of software or '***SOFT ROBOT'*** that acts on behalf of the user by performing special task such as filtering email, negotiating for services, automating complex tasks, scheduling appointments, finding and filtering information and making travel arrangements. Intelligent agent has been predicted to be the most important computer paradigm in the next ten years. By the year 2000, every significance application would have some form of agent functionality (Janca, 1995).

According to Knapik and Johnson (1998), intelligent agent has the following general characteristics:

a) *Autonomy*: the ability to operate without direct human intervention

b) *Social ability*: the ability to communicate with humans or other agents.

c) *Reactive*: the ability to respond appropriately to changes within their environment or in the needs and preferences of the user.

d) *Proactive*: the ability to take initiative to act in order to achieve the goals determined by the user.

e) *Mobility*: the ability to travel through the network executing commands and carrying accumulated data with them.

f) *Collaborative behaviour*: the ability to work with other types of agents, which possess various capabilities in order to achieve a common goal.

g) ***Adaptive***: the ability to learn from experience and use that learning to improve behaviour and reasoning processes.

h) ***Inferential***: the ability to use prior knowledge of general goals and methods in order to act on abstract specifications, and also be flexible enough to extrapolate from given information.

Although intelligent agents can embody any combination of these characteristics, they frequently have very limited and discrete functions. The high level of intelligence and autonomy attributed to some agents is the synthesis of aggregate activities of many types of agents actively exchanging knowledge (Bradshaw, 1997).

One of the most promising research areas for intelligent agent is education and training. Such an agent can be used specifically to support and guide the interaction between the student and the system. This agent is referred to as pedagogical agent. Pedagogical agent is an autonomous agent that acts as virtual tutors or teacher to create rich, face-to-face learning interactions. The primary function is to support student in accordance with the application of pedagogical theory within learning environments. It can also serve as a pedagogical expert where it can monitor and evaluate the timing and implementation of teaching intervention such as giving help, feedback and hint. It will act upon the environment and interact with the student in ways that will facilitate learning, while dynamically responding to spontaneously occurring opportunities for instruction and personalized tutoring. This is possible because the agent monitors the progress and current knowledge of the student in each task. The agent has knowledge of the skills that

are needed for the task, as a human tutor would demonstrate them. It then compares this knowledge with the student's performance of the same skill. When provided with a suitably rich interface, multi-modal dialog can be added to the interaction in order to ensure instructional effectiveness.

Furthermore, pedagogical agent can also be represented in educational system as animated characters to make the learning process more lively and appealing. Animated pedagogical agents offer great promise for broadening the bandwidth of communication between the system and user, and increasing the ability of the system to engage and motivate student (Johnson *et al*., 2000).

3.0 Related Works and Approach

There are several tutoring systems that used hints as a tutoring tactic. ***Andes*** (Gertner *et al*., 1998) generates individual hints using a Bayesian network based student model to establish follow-up hints, and deliver them using an associated sequence of hint templates for each goal and fact in its knowledge base. Figure 2 shows the framework of the ***Andes*** system.
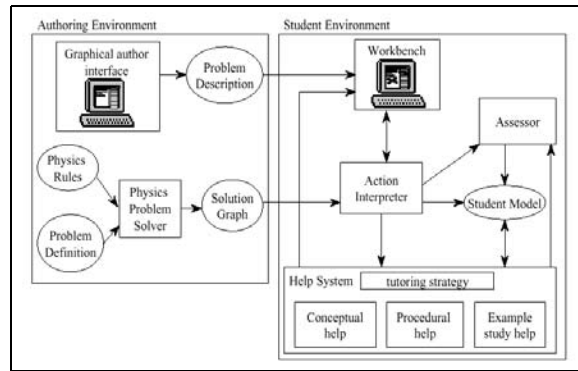
Figure 2: Framework of the Andes system

The **Lisp Tutor** (Anderson *et al*., 1995) also generates hints from a sequence of hint templates. It used model tracing techniques to detect whether a student is following the correct solution path or not. **Sherlock II** (Lesgold *et al.*, 1992) generates a paragraph after the conclusion of the tutoring session that sometimes contains a hint. **CIRCSIM-Tutor** (Zhou *et al*., 1999) used heuristic rules to choose a hinting strategy based on the category of student's answer, the tutorial plan, and the tutoring history. The content is determined by searching the domain knowledge base to instantiate strategy.

In our prototype system, the central issue of hinting is to help a student to recall the related domain rules using animated pedagogical agent. This agent will guide, help and support the student in accordance with the application of pedagogical theory within learning environment. This can be made since the agent monitors the progress and the current knowledge of the student in each questioned. The agent has the knowledge of the skills that are needed for the question, as a human tutor would help them. It then compares this knowledge with the student's performance of the same skill and provides a hint that the student's need to answer the question.

Furthermore, we have classified hints to two categories which are *CI-Hints* and *PT-Hints*. It is being categorized by the manner that students are prompted with the information they need to proceed with their problem solving (Hume, 1996). Some hints directly convey information to the students (*CI-Hints*). Other hints point to pertinent information but do not explicitly convey information to the student *(PT-Hints)*.

The rules for hinting in our approach are based on the behaviour of a student. There are two conditions when the agent will provide hinting:

a) The student must have exhibited some deficiency or error.

b) The student is likely to respond positively to the hint.

However, there are two conditions when the agent ceases to use hinting as a tactic:

a) The student gives a rapid answer in less than three second.

b) If repeated hints are given for 3 times, hinting will terminate and the agent will start for explanation process.

Based on the human tutoring transcripts, a set of hinting strategies were abstracted, as described before. Then, a hinting algorithm is developed for each category of student answer. Each answer category is associated with a predefined list of strategies. Some of the algorithms are quite simple, such as, if the student gives a near miss answer, the agent responds with a leading question that points to an intermediate link from the near miss to the correct answer. However, some of the algorithms can be more complex, for example,

if the student's answer is incorrect, there are several available strategies. If the tutor is tutoring a causal link in the forward direction, most hinting strategies focus on evoking terms related to the variable already mentioned or on giving an intermediate link in the forward direction.

The following are some hinting strategies that are being integrated with animated pedagogical agent adopted from Zhou *et al*. (1999) analysis of human tutoring transcripts.

a)   *Refer to an Object*

Occasionally the system may point to an object to help student concentrates on the analogy of the term in Data Structure and Algorithm Analysis subject if the student is unable to answer a question. This kind of hint is useful when the student has problem in finding the first variable of the answer for the question given by the agent.

b)   *Give an Intermediate Causal Link*

In this strategy, the agent offers a small piece of information relating the variable in question to the desired answer. As an example, in Data Structure and Algorithm Analysis subject, suppose there are several causally related physiological variables such as A that affects X and affects B as shown in Figure 3. Usually the tutor will teach the relationship

between A and B only, ignoring intermediate steps like X. The pedagogical expectation is that the student will think along these lines and find the desired answer.
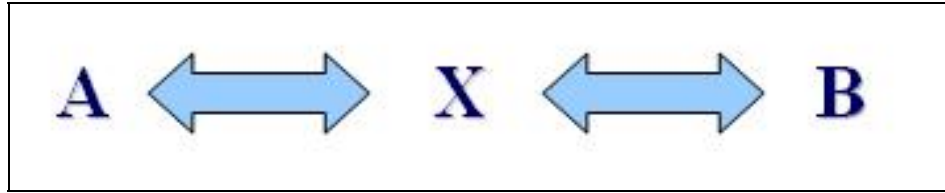
Figure 3: Related Physiological Variables

c) *Give Evoking Terms or Synonyms*

In order to teach some facts and concepts, most of the time a tutor use a specific set of computer terms. With the intention of encouraging the student to use the same terms, the tutor sometimes chooses more evocative phrases. For example, in data structure course the tutor often use "*object queue*" as a synonym for "*First in First Out*" and evoking images of student queuing entering a bus or vehicles queuing to get a toll ticket as shown in Figure 4. This strategy is used by the agent in giving hints about the concept of stack in Data Structure and Algorithm Analysis subject.

Figure 4: Vehicles queuing to get a toll ticket

d)   ***Linguistic Hint***

Since human tutors use natural language, they sometimes give subtle linguistic hints which include very little domain information. These hints are intended to help the student to think more actively. A typical example occurs when the agent is expecting several parameters from the student and the student gives only some of them. The agent may simply reply with "*And?*" to indicate that more information is expected.

The mentioned strategies are the most frequently used. However, some other strategies are used only in special tutoring situations, such as, pointing out the function of a term, using capital letters to indicate a core variable, giving a definition, pointing out the problem solving context, and referring to an equation.

To facilitate a web-based delivery, the prototype implemented mainly using four web-based programming language and tools such as Allaire ColdFusion, Java Applet, JavaScript and VBScript. The interface of pedagogical agent has been developed using Microsoft Agent. Several other software's packages have also been used for various purposes. The prototype system will be tested by a group of student taking Data Structure and Analysis Algorithm at University Utara Malaysia. The results will be evaluated to see the effectiveness of hinting strategies for different categories of student response using animated pedagogical agent.

4.0 System Description: *HINTAGENT*

HINTAGENT is an intelligent web-based educational system that teaches a few topics of Data Structure and Algorithm Analysis subject such as stacks, queues and binary tree. The system used three animated pedagogical agents that communicate with the student in natural language and performing various pedagogical functions. Namely, these three agents are:

a) *Clue Bird*

Clue Bird monitors student progress by giving hints that directly convey information to the students (*CI-Hints*) when student press the clue button or at a certain time period. *Clue Bird* hinting action can be found in three general forms:

a)   explanation followed by a question

b)   summary followed by a question

c)   some combination of explanation and summary followed by a question

b) Uncle Mat
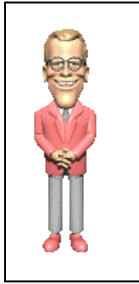
Uncle Mat provide hint in term of *PT-Hints* type. The form of *PT-Hints* can vary from a direct question to a declarative statement to an imperative statement. Uncle Mat assumes that the student understands the current problem or question even if no explicit question is posed.

c) Mr. Phua

Mr. Phua provides an explanation if repeated hints (usually three) directed at a particular issue are not successful. He also evaluates student's answers from the exercise taken and calculated the student marks. *Mr. Phua* will also report the student performance to the lecturer.

Figure 5, 6, 7 and 8 show several snapshots from the prototype system.
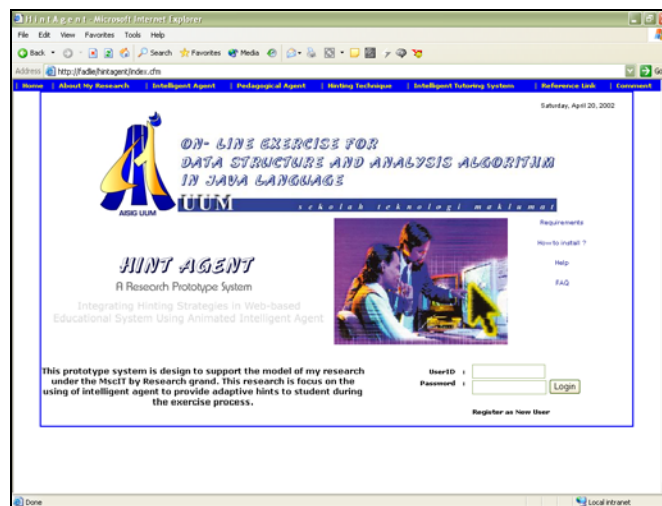
Figure 5: System Interface
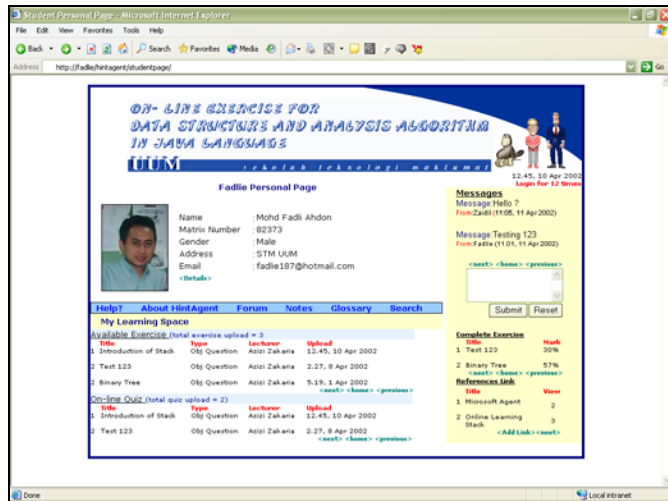
Figure 6: Student Learning Space
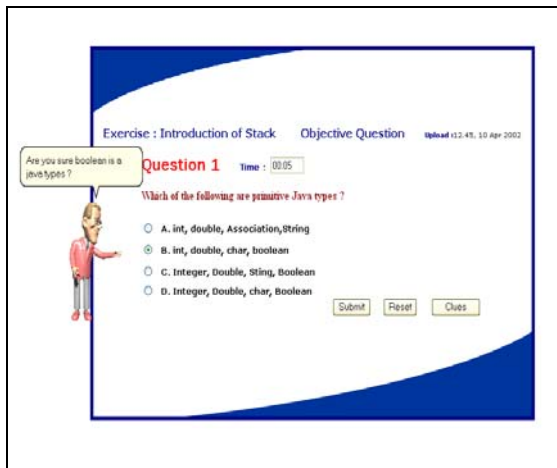
Figure 7: Exercise Session with *Uncle Mat*
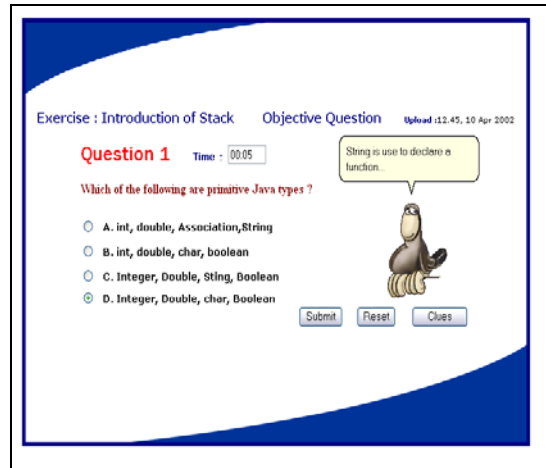
Figure 8: Exercise Session with *Clue Bird*

5.0 Proposed Model
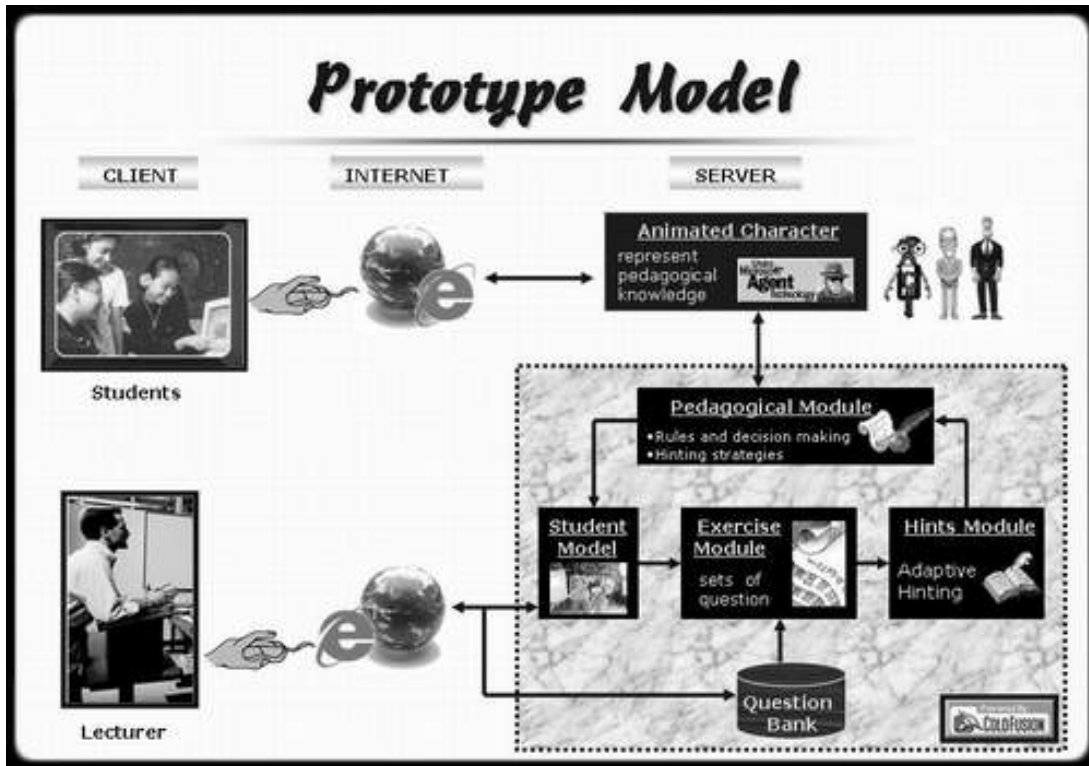
Figure 9: Proposed prototype model

Figure 9 shows the proposed model of the prototype system consisting of the animated pedagogical agent and web-based tutoring component that are located on the server side. The proposed model of the prototype system consists of four main components namely, *Pedagogical Module*, *Student Model*, *Exercise Module* and *Hints Module*. The *Pedagogical Module* manages the interaction between the student and the system by retrieving the information and knowledge from the *Student Model, Exercise Module* and the *Hints Module*. The lecturer can retrieve and update information from *Student Model* as well as *Question Bank*. The proposed model consists of the following components:

a) **The Student Model**

This model stores the student profile. It contains information about the student understanding of the *Exercise Module* by having a model of student's answering style and using diagnostic tools contained within the *Pedagogical Module* to extract learner's state of understanding about the given question. The Student Model will tailor instructions to a student's idiosyncrasies and learning requirements. Without this knowledge, the *Pedagogical Module* has no basis to make decisions, and is forced to treat all students equally.

b) The Pedagogical Module

This module contains rules or other decision making tools that allow it to judge the student's understanding of a subject domain (as represented by the *Student Model*) and matches it with the actual knowledge structure (as represented by *Hints Module*). The module uses information from student model to determine the hinting strategies aspects that should be presented to the student and identify the needs for each student. The module provides a model of the tutoring process and generates correct forms of instruction that animated agent characters will utilized.

c) The Hints Module

The *Hints Module* contains information about the hints knowledge domain, such as, facts and concepts, and the processes needed to complete the problems within the system. This is the most important module because without this module, there would be no hint that

can be provide to a student. Generally, it requires significant knowledge engineering techniques to represent a domain that the pedagogical agent can utilize.

d) *The Exercise Module*

This module contains questions and quizzes that will be updated by the lecturer and used by the Hints Module during the learning process.

6.0 Discussion

Integrating pedagogical agent in web-based educational system is currently a hot issue in research. By incorporating hinting strategies with animated pedagogical agent, the system can be more interactive and adaptive. Furthermore, animated pedagogical agents introduce a new paradigm for instruction that is based on concept of shared abilities and cooperative learning between humans and computers. Apart from difficulties in actually constructing animated pedagogical agents for education, exploring the development of artificially animated pedagogical agent is a worthy task in enhancing our understanding.

7.0 Conclusion

A literature study of hints has been initiated. Integrating hinting in educational system can promote interactive between a student and the system as well as increasing student awareness and alertness. The implementation of hinting strategy using animated pedagogical agent offers more interactivity and adaptability. A difference type of hints can be presented to different types of student considering their level of understanding, as stated by the pedagogy theory. The animated pedagogical agent behaviours and expressions can be also deliberately designed in order to appear lifelike and thus creating a more friendly teaching and learning environment. However, it is still necessary for these agents to have a rich representation of task domain knowledge to support a wide range of pedagogical capabilities.

8.0 Acknowledgments

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A FRAMEWORK FOR MATHEMATICS EDUCATIONAL SOFTWARE INCORPORATING STUDENTS' PREFERENCES

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ABSTRACT

Teachers in schools, as well as academic instructors in institutions of higher education are generally disappointed at today's students' attitude towards knowledge and their lack of motivation to learn. It seems that the perceptions of knowledge between instructors and students greatly differ. As the students changed dramatically so should the instructors and their method of instruction. This paper describes a theoretical framework for developing mathematics educational software incorporating the students' personality types and also their critical and creative thinking skills into the instructional design. Preliminary study was carried out to identify different personality types (Extrovert-Sensing (ES), Introvert-Sensing (IS), Extrovert-Intuition (EN) and Introvert-Intuition (IN)) and also critical and creative thinking skills in mathematics of Malaysian Form 5 students. The Myers-Briggs Type Indicator (MBTI) was used to categorize the students into the ES, IS, EN and IN type. These four personality types were then crossed with the critical and creative thinking to obtain the Personality-Critical/Creative type. For our purpose, 32 students were involved in the preliminary study. Based on the data obtained, a theoretical framework was then designed to cater to the needs of the students. This framework provides a new and exciting dimension in fulfilling different students' preferences when they learn mathematics through software.

BACKGROUND

Teachers in schools, as well as academic instructors in institutions of higher education are generally disappointed at today's students' attitude towards knowledge and their lack of motivation to learn. Many students come to the class unprepared and easily get bored in the traditional lecture environment. Students seem to reject the chalk and talk instruction method that is being practiced by most teachers, as well as academic instructors. The perceptions of knowledge and learning method between instructors and students greatly differ.

As the students changed dramatically, so should the instructors and their instruction method. New learning designs or adapted learning designs are suggested to be implemented in today's classroom in order to change students' learning attitude. This paper describes a theoretical framework for developing mathematics educational software incorporating the students' personality types and also their critical and creative thinking skills into the instructional design.

In Malaysia, the Ministry of Education has launched much effort to expand the practice of critical and creative thinking skills in the teaching-learning process. Since 1994, the Ministry of Education in Malaysia had infused critical and creative thinking skills into the school curriculum. Critical and creative thinking is taught explicitly and effectively to maximize the students' learning. In January 1994 Malaysia's director-general of education, Tan Sri Datuk Dr. Wan Mohd. Zahid Wan Mohd. Noor, had annouced that students sitting for public examinations will pose more challenging questions, especially questions that evaluate students' critical, creative and analytical thinking (Som & Mohd.

Dahalan, 2002). This announcement illustrates the importance of critical and creative thinking skills in Malaysian education.

The importance of critical and creative thinking skills could also be seen in the third objectives of KBSM (Kurikulum Bersepadu Sekolah Menengah) Additional Mathematics syllabus which emphasizes students' abilities to expand critical and creative thinking in the Mathematics learning process (Kementerian Pendidikan Malaysia, 2000). Most experts in the area (Swartz & Parks, 1994; Zielinski & Sarachine, 1993; Presseisen, 1987) agree that critical and creative thinking skills are important in the educational system. Students are encouraged to think critically and creatively as a strategy to increase their academic performance and thinking quality. Good critical and creative thinking skills enable students to handle their studies skilfully.

Information regarding students' personality types can help instructors understand their students more and plan effective teaching method to fulfill most students' learning preferences. As for students, they can increase their self-awareness by knowing their own personality types (Moore, Dietz & Jenkins, 1997). Engaging in the process of learning must include awareness of the students in their way approaching the subjects, adapting the learning differences, increasing their learning quality and planning their future with a better perspective. The identification of the students' personality types by both instructors and students themselves can help minimize the learning gap between instructors and students.

Nowadays, there are varieties in students' personality types and also their critical and creative thinking skills. As a result, the appropriate teaching and learning approaches that suit all students can be a challenging activity. An activity may be ideal for some students, quite useful for the other students but not useful at all for the rest of the students. Educators or instructors have to manage carefully the varieties among students' personality types and also their critical and creative thinking skills in the daily process of teachng. A review on the relationships that might exist between personality types and also critical and creative thinking skills, as measured by Myers-Briggs Type Indicator (MBTI) instrument and also questions that evaluate critical and creative thinking may be useful for the educators and instructors to increase the academic performance of their students. The development of mathematics educational software, that incorporates mathematics content, personality types and also critical and creative thinking of the students, is an area worth researching.

PRELIMINARY STUDY

A preliminary study was carried out to identify different personality types (ES, IS, EN, IN) and also the critical and creative thinking skills for Malaysian Form 5 secondary school students in learning mathematics. The purpose of the preliminary study was to increase the self-awareness of the students through Myers-Briggs Type Indicator (MBTI), and also to enhance the quality of critical and creative thinking skills among the students through subjective questions that were used as evaluation. MBTI is an internationally recognized instrument (Gardner & Korth, 2001) in contributing our

understanding of the role of individual differences in the learning process (Schroeder, 1993). The summary of MBTI's reliability and validity in various fields can be reviewed from Myers, et.al, 1998; Myers & McCaulley, 1985 and Wheeler, 2001. In this study, MBTI was used to categorise the students into the ES, IS, EN, IN type. Lawrence (1993) and Gardner & Korth (2001) suggested the use of ES, IS, EN, IN, rather than all 16 types in MBTI as a simpler way to diversify the results of a study. These four personality types were then crossed with the critical and creative thinking to obtain the Personality-Critical/Creative type.

The level of critical and creative thinking that the students engaged was evaluated through subjective questions. The subjective questions and the answers were checked and validated by a mathematics teacher who had 4 years experience in teaching Additional Mathematics. The components of critical and creative thinking being used in this study were taken from Iowa Department of Education (1989) as the suggested Integrated Thinking Model is one of the most comprehensive and useful models (Jonassen, 2000). Components of critical and creative thinking from the model were chosen to analyze and compare the effects of the usage of educational software being developed. According to the model, critical thinking is categorized into 3 components; evaluating, analyzing and connecting, whereas creative thinking is categorized into synthesizing component, imagining component and elaborating component.

The collected data were then analyzed by using Statistical Package for the Social Sciences (SPSS) v10 for Windows. ANOVA with post hoc Tukey HSD tests (α=0.05) and descriptive statistics were performed by using SPSS.

SAMPLE

Purposeful sampling was used to select the sample for this study. A Form 5 class, which consisted of 45 students who had studied the topic Linear Motion in Additional Mathematics subject, was being chosen. These students were given the MBTI instrument test. From the analysis, 27% were ES, 24% EN, 24% IS and 24% IN. These groups of students with the different personalities were then given the subjective test to determine their level of critical and creative thinking skills. From the collected data, 2 students did not write down their name, 4 students did not answer completely all of the items and 4 students performed very poorly in the subjective questions test. To avoid any extraordinary outcomes, those students were omitted from the analysis of this study. As a result, 32 students were actually involved in the preliminary study. From the amount, 8 students were in ES type, 8 students were in EN type, 8 students were in IS type and 8 students were in IN type as the ratio for ES, EN, IS, IN in the class was actually 1.13:1:1:1.

RESULTS

As shown in Table 1 below, the students generally did not score high marks in most questions that evaluated their critical and creative thinking skills. For each of the

questions, the full marks were 10. In average, the students scored higher than 5 marks in questions related to translating skill, working backward skill, comparing and contrasting skill and also identifying all possible solutions skill.

Significant differences in dominating translating skill could be seen between ENs, ISs and INs; whereby ENs scored significantly higher than ISs and INs scored significantly higher than ISs. Significant differences could also be found in determining parts-whole relationships skill and identifying relationships skill between different personality types (refer to Table 1 for more detailed information). For interpreting skill, INs with a mean of 4.38 scored significantly higher than ESs with a mean of 1.00 and ISs with a mean of 1.13. For drawing figures skill, INs with a mean of 6.56 scored significantly higher than ESs and ENs, whereas ISs with a mean of 5.94 scored significantly higher than ESs with a mean of 2.05.

The results generally showed that there were significant differences that existed between the 4 personality types of the students in dominating some of the critical and creative thinking skills.

PROPOSED THEORETICAL FRAMEWORK

The proposed theoretical framework (as shown in Figure 1) was designed as a result from the significant differences that existed between students with ES, EN, IS, IN type in dominating different critical and creative thinking skills. This framework intends to

provide new and exciting dimension in fulfilling different students' preferences and skills' domination. This framework is used for mathematics educational software.

As shown in Figure 1, the mathematics educational software takes into account of 4 different personality types of the students and also the critical and creative thinking (CCT) model. The personality types of the students are measured by using MBTI (Myers-Briggs Type Indicator). The theory behind the MBTI is type theory. Type theory expects specific differences to be found in specific people. These differences provide the rationale to cope with differences of the people more constructively. Type theory also states that individuals can gain benefits from knowing their own personality type, such as type dichotomies E-I, S-N.

CCT model consists of 2 basic components; critical thinking and creative thinking. These are the essential thinking skills that students need to manage well in order to increase their learning quality. Critical thinking involves 3 general skills; analyzing, evaluating and connecting, whereas creative thinking involves 3 general skills; synthesizing, elaborating and imagining. There are many specific skills which group under each analyzing, evaluating, connecting, synthesizing, elaborating and imagining.

Students with different personality-critical/creative type use the software to enhance their critical and creative thinking skills. Some important characteristics of constructivisme are also taken into account in the software (See Figure 1 for detailed information). As a result, the software intends to create the environment in which students with ES, EN, IS,

IN type can practice critical and creative thinking skills on their own; students with ES, EN, IS, IN type can reorganize knowledge and generate knowledge; students with ES, EN, IS, IN type can handle their preferences more constructively; students can use or practice critical and creative thinking skills flexibly.

After using software, the data regarding personality-critical/creative type are gathered. For example, the different levels of domination for ES in analyzing skill, evaluating skill, connecting skill, synthesizing skill, elaborating skill and imagining skill are gathered. Those are the same cases for EN, IS, IN in their levels of domination in those 6 skills. Significant increments or changes in critical and creative thinking level for different students' personality type are recorded for further analysis.

Table 1: Different Personality Type of the Students toward the Domination of Different Critical and Creative Thinking Skills

Critical & Creative Thinking Skills	Means of Personality Type Toward Domination of Different Critical & Creative Thinking Skills				
	ES	EN	IS	IN	Overall
Critical Thinking Skills					
1. Analyzing					
▪ Translating	4.50	8.13	3.00	7.00	5.6
2. Evaluating					
▪ Working Backward	4.63	5.13	4.63	7.50	5.4
3. Connecting					
▪ Comparing & Contrasting	6.13	5.81	5.25	6.06	5.8
▪ Determining Parts-Whole Relationships	6.13	2.38	2.38	6.25	4.2
▪ Identifying Relationships	2.00	8.00	4.44	5.25	4.9
Creative Thinking Skills					
1. Elaborating					
▪ Interpreting	1.00	1.81	1.13	4.38	2.0
2. Imagining					
▪ Identifying All Possible Solutions	7.50	5.63	7.63	9.00	7.4
▪ Drawing Figures	2.05	2.63	5.94	6.56	4.2
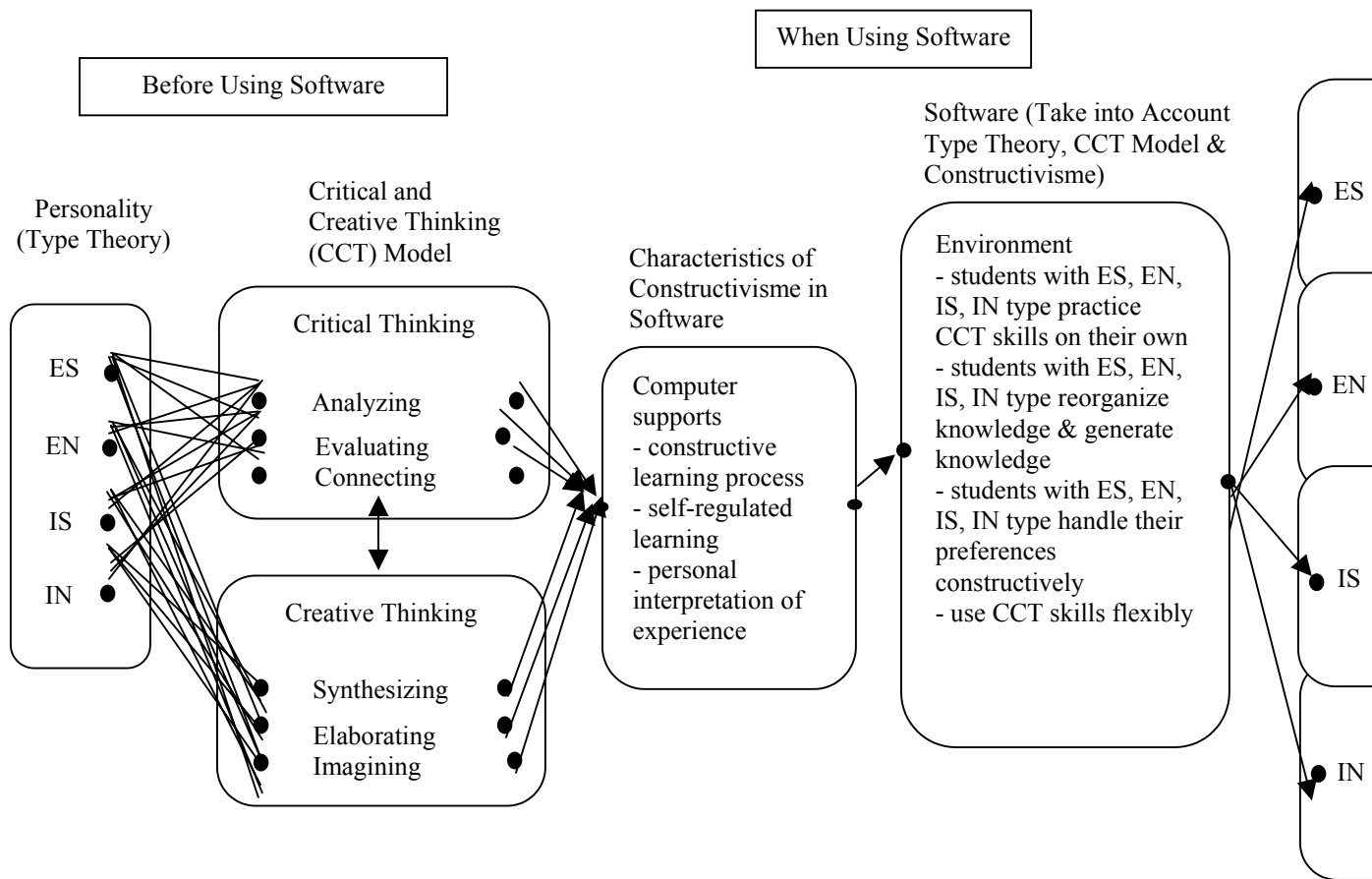
Figure 1: The Proposed Theoretical Framework

CONCLUSION

The proposed theoretical framework was designed as a result from the significant differences that existed between the 4 personality types of the students in dominating the critical and creative thinking skills. Furthermore, the different levels of the students in dominating critical and creative thinking skills could be enhanced through the development of educational software that incorporated students' preferences. The proposed software could provide exciting environment for different personality types of the students to explore mathematical knowledge, practice mathematical skills with the infusion of critical and creative thinking skills into the subject-matter instruction. The infusion of critical thinking skills (Ennis, 1989) and creative thinking skills in subject-matter instruction are deep and thoughtful.

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ELMaS : GENERIC MODEL OF A WEB-BASED LEARNING MANAGEMENT SYSTEM FOR TEACHER'S TRAINING

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ABSTRACT

E-Learning has provided a new dimension approach in handling the teaching and learning of an educational institution. Web-based learning is an Internet application program, which was developed to fulfill the learning concept in the E-learning program. **E**ducational **L**earning **Ma**nagement **S**ystem (ELMaS) is a generic model of the Web-based Learning Management System for the Teacher's Training College. The methodology used in developing ELMaS is Rapid Prototyping. ELMaS consists of three modules, which are the Course Registration, Course Contents and Course Activities. These modules enable ELMaS accessing, planning, delivering, and managing E-Learning programs to fulfill the Smart Learning principles in order to construct an integrated learning, interactive learning and to inspire the collaborative learning in teacher's training. ELMaS can be accessed via the Internet and Intranet infrastructure, and can be deployed either as an online-learning or as a supplementary medium for the face-to-face learning.

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INTRODUCTION

The current and future trend in education is focus on the searching and information retrieval based on the Internet application technology. The Internet technology has offered a new dimension in the teaching and learning approach since it has the capability to provide huge and varieties of information resources using efficient search engines and directories (Sonnenreich, 1998). With the rapid development of the Internet technology, the e-learning concept has been introduced and later has presented the educational institution a new dimension approach in managing the teaching and learning.

The Web-based learning management system is one of the Internet application programs that have been used widely by the computer software company and education institution. It has been used as an infrastructure for the implementation of the E-learning program. The system has growth rapidly and being used widely as an information system and database system to admin and manage all the teaching and learning activities.

INFORMATION TECHNOLOGY AND LEARNING STYLES

According to Kozma (1995), research of Information Technology and Communication in Education showed that the Information and Communications Technology (ICT) development and Internet technology did not provide a full impact towards education and only contribute minimal impact towards the learning process. Although the multimedia technology has been integrated in the development of the computer-based teaching resources, the application is only able to act as a decorator to the interface and did not function as the main part that could not assist in enhance the teaching.

The question is that, how could this happened? Is it the teacher who is not creative enough in planning the teaching with the technology-rich learning environment concept? or is it the teacher could not apply the strategy, technique and teaching approach in classroom to the computer-based teaching sources because they were not given a clear and complete guidelines regarding ICT application in producing web-computer-based resources?. All the questions are more towards the development of teaching resources that could not function as expected. What about the students that involved as an object to validate the success of the learning activities? Has the teacher identify the learning level and learning style of the student? Recent research proved that the student learning style have very high influenced in learning product.

According to Hossein Arsham (2002), to produce a success computer-based teaching and learning activities, the teaching resources should deliberately planned and able to create an environment that both the student and teachers actively involved in the learning process. The teaching would be dull and boring if the educator did not consider the different level of individual learning style. Carbo (1986) and Campbell & Campbell (1999) stated that the student would be more motivated, initiated and able to increase their learning level, provided that if the teacher is able to deliver the teaching preach parallel with the student learning style. In a normal face to face (F2F) classroom, it is hard for the educator to identify and fulfill all the learning style practiced by each student. In order to fulfill different level of learning style, Schweizer (1999) and Nelson (2001) suggested that ICT is used because with the application of this technology, it could boost up an effective learning opportunities.

A well planned ICT application and usage enable to produce student with these characteristics:

    (i)   Student who is more responsible towards his/her learning activities.

    (ii)   Student that able to identify his learning resources requirements

    (iii)   Student is able search for information according to his/her needs, access level and knowledge.

(iv)   Student that able to develop new knowledge based on information search and retrieval, two-way communications and self-finding.

In Malaysia, the plan to fulfill the requirement for different learning style has been introduced via the Smart school project. This learning values emphasize to four learning domains which are *Self-Directed, Self-Access, Self-Asses s* and *Self-Paced.*

(i)   Self-Directed is a self-directed learning where the student will identify his/her own topic in certain discipline that he/she wishes to learn.

(ii)   Self-Access is a self-access learning where the student can search and retrieve information regarding the topics to learn from various sources. References book, magazines, CD-ROM, and Internet are the sources that they utilize to get the information.

(iii)   Self-Assessed is a self assessed learning where the student can evaluate and assess himself of what topic has learned. If the achievement for certain topic met, he can then move to other topics.

(iv)   Self-Paced is a self phase by phase learning. This type of learning has provided some space for the student to monitor his self-learning.

The question is how a teacher could manage his/her teaching activities to meet the smart learning goal if there is no system that could detect and identify the student learning development?. Therefore it is very important for an educational institution to have a computer based environment and infrastructure that meet this goal.

INFORMATION TECHNOLOGY INFRASTRUCTURE AND INFORSTRUCTURE

The IT infrastructure is referred to the environmental support provided in order to enable the implementation of online computer based teaching and learning. A complete infrastructure is required to guarantee the success of the computer based teaching and learning. Both teacher and student need sufficient numbers of computer, complete networking system and a server that can function around the clock in order to assure e-learning process run efficiently. A student, who used a computer-based learning material, is an autonomous self-learners. He/she totally depends on the ICT facilities to access the learning materials. As for the educator, he/she needs an appropriate and easy computer software to help him/her built an electronic teaching materials.

The effectiveness of a web-based teaching refers to the capability of the students to access and learn from the materials provided through the system. Both the teacher and student are unable to experience a good teaching and learning or in other words the implementation of the e learning is failed if the ICT infrastructure is not complete and inefficient. Therefore, based on these requirements, the educational institution's Campus networking system project has been implemented since 1999. This project involved the process of supply, delivery, installation, testing, certified and documentation of hardware and software to support the ICT system. Campus networking system infrastructure included all the local area network facilities and leased line (Bahagian Pendidikan Guru, 2002). The first phase of the project witness five teacher's college has complete with the infrastructure mentioned. While the second phase, which involved several others teacher college, is still under implementation.

The campus-networking project will offer a new dimension for the educational system in the teacher's college especially in the e-learning process. The infrastructure provided is able to increase the effectiveness and the efficiency of the learning that based on the smart learning values.

Self directed, self-access and self-phased can be applied interactively in accessing teaching and learning materials through the web pages and training software (Bahagian Pendidikan Guru, 2002). The teaching and learning that based on Internet and Intranet need to be expanded completely and integrated in the teacher's college in order to produce ICT and E-Learning skillful teachers (BPG, 2002).

Providing ICT infrastructure facilities itself would not bring out impact to the education if the teacher itself does not utilize these facilities during teaching and learning activities. In order to benefits from ICT, teachers should have the skill in designing teaching materials electronically using specific software and should knows type of appropriate communications to be utilize as teaching and learning environment. Teachers should plan an interactive learning program given that ICT offers interactive elements through certain application. According to Hossein Arsham (2002), interactive teaching is refers to the teaching approach that used the web-based materials; therefore enable to create such as an environment, which encourages maximum involvement between the students themselves and, between the student and the teacher. The approaches commonly used are idea sharing via two ways communication between the educators and student using the virtual chat room and one way communication where the student will send inquiries regarding certain subjects which is hard to understand through the bulletin board, forum discussion and e-mail. The trendy interactive approach used by most of the web-based training is one-way communication (Hossein Arsham, 2002). The production of interactive teaching materials depends on the interface design used. An effective interface design basically consists of four characteristics such as below:

(i)   Teaching materials, which are easy to access.

(ii)   Teaching materials should be easy to use due to lack of technical skill.

(iii)   Teaching materials which can function accordingly

(iv)   Teaching materials that can illustrate certain concepts or ideas.

LEARNING MANAGEMENT SYSTEM

An interactive teaching materials prepared by educators should be organized efficiently, systematic and effectively in order to take full advantage of it's usage in learning. Therefore it is important to have a system, which is able to manage all the required teaching materials activities. The system is also known as Learning Management System (LMS). Generally, LMS software is an infrastructure utilities in planning, delivering and managing E-Learning program using the existing format or can choose from potential format (Evangelisti, 2002).

According to the American Society for Training & Development (ASTD, 2002), LMS software should have these criteria's:

a.   System that can support varieties of learning values.

b.   System that can be integrated with the Human Resources Information System.

c.   System that capable of managing the teaching activities.

E-Learning Center's (eCLIPSE, 2002) has identified 10 modules required in LMS software. The modules are as below:

(i)   Course Management Module

(ii)   Animation and Demonstration utilities for the on-line teaching materials.

(iii)   On-line Interactive Testing and Evaluation

(iv)   Forum and discussion

(v)   Group Discussion Software (Groupware)

(vi)   On-line meeting module (Windows NetMeeting)

(vii)   On-line community service utilities

(viii) Chat Room

(ix)   Module to perform a collaboration learning

(x)   Module to snatch the learning activities (Web logging)

There are several LMS modules that contain forum utilities, message board and chat room that have been utilized and integrated in on-line community web pages (World Crossing, 2002).

GENERIC MODEL OF EDUCATION LEARNING MANAGEMENT SYSTEM (ELMaS)

ELMaS Vision and Mission

ELMaS is a system purposely developed to fulfill the E-Learning essential for the teacher's trainee in Teacher's College. The Learning Management System ELMaS planned accordingly with the mission, vision, goals, objectives and other values outlined by the Bahagian Pendidikan Guru in order to turn out the world-class educators through ICT integration in teaching and learning via e learning. ELMaS development is to fulfill the vision towards enhanced E-Learning in teacher's training by knowledge management integration towards an effective Learning Management System.

ELMaS Development

The Institut Perguruan Darulaman (IPDA)'s lecturers have developed ELMaS using the open source software. The idea for developing ELMAS is based on the latest learning trend which is E-Learning, the requirement of a system that able to manage the learning activities electronically, and the requirement of the system that able to detect the knowledge, skill and trainee's competency in Teachers's Training. IPDA has identified ELMaS as a generic model for managing the learning activities based on its function and ability as a web-based application, which is able to manage the learning activities electronically, detect the learning product, integration with the Human Resource Management System and learning resources, the development of the teaching materials to be delivered or submitted by the student, and the availability of the additional management features for evaluation towards the smart learning concepts.

ELMaS Module

ELMaS consists of 3 main modules. These modules provides facilities such as below:

i.   To enable the SeDAAP values, the student are allowed to download the course materials required.

ii.   The lecturers could distribute the course work using announcement facilities or through registered e-mail facilities.

iii. Course work can be submitted electronically to the lectures while the system could detect and validate the date for course work submission.

Model ELMaS Ver 1.0

Figure 1 below illustrates the data flow and the process involves in ELMaS
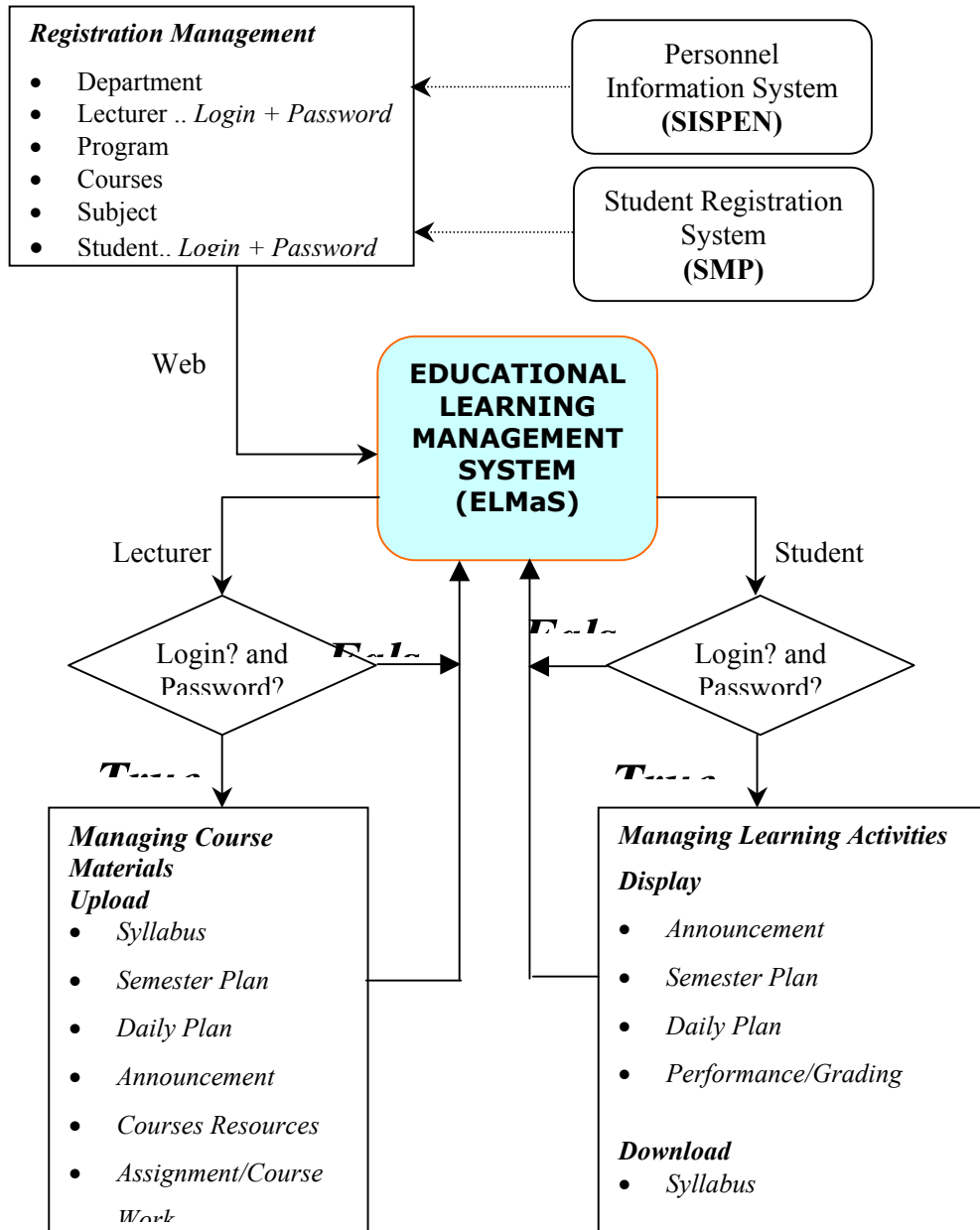
Figure 1 : ELMaS Model

Strategy in implementing ELMaS

The implementation of ELMaS in Teacher's Training is based on the Blended Learning Concept (B-Learning). Blended Learning is a combination of F2F learning, project-based learning, practicum learning and web-based learning. In the Blended Learning approach, the learning activities do not implement fully online. On the other hand ELMaS is used during the F2F teaching.

PRELIMINARY TEST FOR ELMAS 1.0

The ELMaS concept has been presented to the BPG E-Learning Development Meeting. It has gone through 3 tests. The complete information regarding the test is as below:

Respondent

ELMaS modules have been tested, by the lecturers of Jabatan Teknologi Pendidikan. These lecturers registered the student for the subject offered in January 2002 intake. These subjects are for programs such as Kursus Perguruan Lepas Ijazah (KPLI) majoring in Information Technology, Multimedia Interactive and Computer Science, the Program Khas Pensiswazahan Guru (PKPG) majoring in Information Technology and education and Multimedia Interactive. Total of 247 students involved in this test.

The distributions of the student are illustrated as in Table 1 below.

Table 1:
Distribution of Student involved in the ELMaS preliminary test.

Program	Course	Number of Students	Total number of student
Kursus Perguruan Lepas Ijazah (KPLI)	Information Technology Computer Science Multimedia Interactive	17 40 19	**76**
Program Khas Pensiswazahan (PKPG)	Information Technology Multimedia Interactive	112 17	**129**
Kursus Sijil Perguruan Khas (KSPK)	Information Technology	16	**16**
Kursus Dalam Perkhidmatan 14 Minggu (KDP)	Information Technology	22	**22**
Total			**247 student**

The lecturers who involved in this preliminary test upload teaching resources, evaluation materials and teaching activities information according to the syllabus provided by

Bahagian Pendidikan Guru (BPG), Universiti Pendidikan Sultan Idris (UPSI) and Universiti Utara Malaysia (UUM). All the teaching materials have been utilized during teaching and learning session is on. The students are able to download the teaching materials from the ELMaS server for revision apart from the official learning time.

Technical Specification

Three computer labs are utilized for the test. Each lab consists of 25 personal computers, which are networked link to the Internet. The ELMaS software and the resources are placed in the same server in order to make it easier to access and manage.

Support resources are required to enhance the teaching and learning using the ELMaS system. The technical specifications used to implement the tests are as below:

- Personal Computers with Pentium III processors
- Main memory of 128 MB RAM or higher
- Network Interface Cards
- UTP Cable of Cat 5 to hook the station to the college networking
- Microsoft Window NT Operating System
- Microsoft ODBC
- MySQL ODBC (Open source)
- Apache 1.3   (Open Source)
- PHP 4.0 (Open source)
- MySQL 3.2.3 or higher (Open source)
- Internet Explorer 5 Browser
- Macromedia Dream Weaver
- Microsoft FrontPage

CONCLUSION

The rapid development of on-line training and education required an expansion on the Learning Management System itself. In order to get into this goal, ELMaS will be updated according to the current educational requirements. To bring up B-L successfully, there are several infrastructures and info structures that have to be improved. Below are several suggestions for these purposes.

(i)   It is essential to increase the amount of the learning resources, and to varieties the materials. Therefore each lecture is required to prepare his/her own web based teaching materials and electronically base resources. He/she shall also plan an implementation strategy for the learning activities to be implemented in F2F teaching.

(ii)   On-line learning facilities such as ICT labs, research studio and high technology simulation studio shall be made available to the student and can be accessed during formal class hour.

(iii)   Some additional values shall be included in ELMaS so that the usage can be expanded to the Intranet and Internet environment. The additional values such as a module to enable communication among the students and lecturers through email, bulletin board, chat room and discussion board. ELMaS shall also be integrated with the computer-based evaluation and on-line questionnaires to enable the student identify and choose their own learning requirements.

Implementation issues shall also be considered. Some of the issues commonly found in E-Learning implementation are the learning resources could not be accessed due to the computer lab and technical difficulties, the data security and secrecy, network and computer maintenance and service to the users.

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PROCEEDINGS   THEME 1   THEME 2   THEME 3   THEME 4

TEACHING AND LEARNING OF MULTIMEDIA SOFTWARE USING MULTIMEDIA COURSEWARE

Among Continuing Education Students

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Teaching and Learning of Multimedia Software Using Multimedia Courseware

Among Continuing Education Students

Abstract

Several initiatives were taken by Universiti Teknologi Malaysia (UTM) to help its students learn information and communication technology related subjects using Compact Disc and the Internet. The first **CERDIk IT** (Computer-based Educational Resource and Development In Information Technology) series, involving students' learning about the basics of computers using an interactive multimedia courseware, has been developed and researched during the late 1990's. The second and third CERDIk IT series, developed using screen capture software, concentrated on students' learning to use multimedia software, namely Adobe Photoshop and Adobe Premiere. A research study was conducted in 2001 to determine the effectiveness of the courseware. Results from the study showed that the lecturers find the courseware very helpful in his/her "multimedia technology" course. One comment was, "I don't have to alleviate the same problems faced by the students during a computer laboratory activity". A majority of the continuing education students who were involved in the study reported that the courseware were easy to use with minor or without any assistance from a lecturer. These students added that they even managed to learn by themselves outside the computer laboratory activity without the presence of a lecturer to assist them.
Introduction

Learning does not stop when the school bell rings. People continue to learn, through work and experience, by necessity and for personal interest, as long as they live. The United States, for example, is rapidly becoming a society of lifelong learners, drawn by countless points of interest along the information highway. One essential resource for continued lifelong learning is the vast network of organizations and media that support the public's burgeoning demand for "freechoice" learning - learning that is often voluntary and guided by a person's needs and interests (Lundmark, 2002).

Universiti Teknologi Malaysia (UTM), in particular the Faculty of Education, conducts courses for continuing education students specializing in fields such as living skills, Islamic education, counseling and guidance and computer science education, Most of these continuing education students are practicing teachers from all over Malaysia.

At UTM, these continuing education students are not considered as distance learning students but instead they are called part-time students. This means that these part-time students will not only have to take the same number of credits as the full-time students but also the same number of contact hours. The only difference is that whenever these part-time students encounter difficulties with their subjects, they will not get the opportunity to meet their lecturers daily as compared to the full-time students. Normally, they will get to meet their lecturers only four to five times within a semester. Thus, meeting and consultation time is a major problem. Will flexible learning be a solution to the problem of meeting and consultation time? How effective are flexible teaching and learning resources such as printed modules, CD-ROMs and e-learning portals help facilitate students' self-directed learning of practical oriented subjects?

Flexible Learning

The student-centered approach underpinning flexible learning requires different teaching and learning methodologies and technologies as well as different relationship between lecturers and students. In comparison to traditional one-way lecture method, flexible learning is broadly characterized by less reliance on face-to-face teaching and more emphasis on guided self-directed learning, greater reliance on the development of high quality learning resources such as printed modules, CD-ROMs, analogue and digital video, analogue and digital audio and the Internet. Flexible learning also provide greater opportunities to communicate outside traditional lecturing times.

The increasing use of information and communication technology (ICT) is often central to much of the implementation of flexible learning. Examples include the delivering of learning resources, providing a communications facility, administering units and student assessment and hosting student support systems.

The deployment of multi-skilled teams rather than the academics should be responsible to undertake all stages of unit planning, development, delivery, assessment and maintenance. Other professionals should be employed to provide special skills such as instructional design, desktop publishing, interactive multimedia CD-ROM development, Web development as well as administration and maintenance of programs. Designing flexible computer-based learning materials, for instance, contains a rich store of expertise from someone who really has been there, done that!

Why move from traditional teaching and learning towards flexible learning? Race (1994) expressed his concern that apart from taking a lot of time, work and commitment to make the switch, one most powerful adversaries of innovation is lecturers' resistance to change. However, justifications for implementing flexible learning should be looked at in a positive manner.

As the proportion of mature and non-traditional-entry students increases, there is a need to complement traditional teaching and learning approaches by creating additional flexible learning pathways, and to replace entirely some traditional approaches disliked by mature learners. With a growing proportion of the population participating in higher education, universities should be able to cater for a greater mix of students' abilities. Thus, flexible learning elements can provide opportunities for mixed-ability groups to come at each individual's own learning pace.

With increasing use of supported self-study resources in secondary education, students' expectations are changing away from that of being taught mostly in lectures. Students now expect more variety in the ways that they can learn, and flexible learning helps provide this variety.

With the increased franchising of university program, the availability of flexible learning resource materials provides an excellent means of ensuring that the quality of learning is maintained and controlled. With the spotlight on quality through teaching quality assessment, flexible learning provision is one way of offering substantive evidence of the excellence of the learning resources used to support students' studies.

An example of a flexible learning initiative can be obtained at the following Uniform Resource Locator, http://www.cfl.mq.edu.au/cfl/flexible/cflflex.html. It was documented that flexible learning is placed within the teaching and learning context summarized in the Macquarie University's Teaching and Learning Plan, Scholarly Teaching: Teaching and Learning Plan 1998. The comprehensive integration of flexible learning into the culture and activities of this Australian university reflects a strong continuity with its founding mission and aspirations.

Implementing Flexible Learning at UTM

Practicing teachers re-entering any continuing education program should be regarded as adult learners. These adult students, if given the opportunity, should be capable of self-directed learning. This is because adults think at the Bloom's formal operational stage of thinking. They should therefore be able to manage self-directed learning with relative ease. Hortin (1998) suggested that any modern learning technology that is catered for adult learners should be self-directive and interactive. A continuing education program should accommodate an interesting learning environment for the adult students. Interactive learning technology can address the variability of learning styles and needs among adult learners. Therefore, a flexible and user-friendly learning technology must be designed and developed for them.

With self-directed learning, a lecturer's time is more efficiently applied through the use of up-to-date teaching and learning technologies, especially with their new role in the new millennium as a facilitator to learning. This will also create less anxiety for these adult student teachers.

The use of supported self-study analogue and digital resources provide the opportunity to complement the traditional constraints of higher education such as lectures and tutorials. Using these self-directed learning materials, learners are able to determine the place, time and pace for learning. In addition, collaborative learning is made easier through these new learning technologies. By promoting the effective and appropriate use of modern teaching and learning technologies, UTM in particular the Faculty of Education, works to meet the needs of the future and enable change in the future learning at the university level.

Among the ICT related courses offered under the Faculty of Education at UTM are computer literacy, information technology in education, educational technology, instructional design in multimedia production, programming and authoring language, multimedia technology and multimedia production. At UTM, ICT remains central to the teacher preparation experience, and that teaching and learning with technology is spreading across the UTM's teacher education curriculum. Besides using printed modules, UTM is also promoting the use of ICT in teaching and learning of ICT-related subjects (Aris, 2001).

Thus, in order to enhance a technology-driven continuing education program, several learning resources such as printed modules, CD-ROMs and e-learning portals were developed (Aris, Abu, Ellington and Dhamotharan, 1999) and recently (2 – 6 October, 2002) refined and updated to meet the changing needs of the adult students.

Purpose of the Study

This preliminary research study concentrated primarily on the use of CD-ROMs to support flexible learning. It did not explore the uses of other analogue and digital learning resources. Thus, the purpose of this study was to obtain information about both lecturers and students' perceptions and experiences as a result of using the courseware (second and third CERDIk IT series) when implemented inside and outside a computer laboratory activity.

Method and Procedures of the Study

Courseware

The first **CERDIk IT** (Computer-based Educational Resource and Development In Information Technology) series involves students' learning about the basics of computers and its applications in education. A CD-ROM was developed and researched during the mid and late 1990's (Aris, Abu, Ellington and Dhamotharan,1998; Aris, 2000; Aris, Abu and Bilal Ali, 2001). The second and third CERDIk IT series concentrated on self-directed learning about using multimedia software namely Adobe Photoshop and Adobe Premiere, respectively.

The treatment instrument is in the form of CD-ROMs. Baharuddin Aris developed such packages for a course "Multimedia Technology" using screen capture software named Lotus ScreenCam. Lotus ScreenCam is a product of Lotus and can be downloaded (sometimes for free) from the Internet. Those parties interested in using the software can also purchase the product at a very reasonable price.

Sample

Only two instructors were asked to participate in the study and all of them agreed for a good cause. These instructors were selected because they were teaching the multimedia technology subject during the first semester of 2001/2002 sessions.

A total of 31 undergraduate students enrolled in a multimedia technology subject participated in this research study. These respondents were based on a cluster sampling of 31 students who enrolled in the first semester of 2001/2002 sessions. All the students who participated in the study were part-time students and most of them are teachers. The age was within a range from 26 to 41 and up. Fourteen of the participants were males and 17 were females.

Data collection

Both the lecturers and students were instructed to use the two courseware (second and third CERDIk IT series) and interview sessions were conducted afterwards. The interviews sessions (research instrument) with the lecturers and students were based on structured but open-ended questions.

Results and Discussions of the Study

Results from the study showed that the lecturers find the courseware very helpful in his/her "multimedia technology" subject. Lecturers were glad to use such packages in his/her multimedia technology subject because they need not answer or demonstrated the same problems faced by the students in the computer laboratory. One comment was, "I don't have to alleviate the same problems faced by the students during a computer laboratory activity".

All the students, based on a cluster sampling of 31 students enrolling in a multimedia technology course, reported that the courseware were easy to use and increased their confidence. They reported that the courseware were easy to use and self-directed. These students added that they even managed to learn by themselves outside the computer laboratory activity with minor or without any assistance from a lecturer to assist them. One student commented, "Your packages

are very useful and it helped me understand how to use both the Adobe Photoshop and Adobe Premiere".

Although many of the adult students have never used computer-based learning material before, they were delighted that the courseware was able to improve their knowledge about the subject and attitude toward computer-based learning materials. They will definitely recommend their colleague to use the courseware.

However, they argued that computer-based learning material should be used as a supporting material rather than being a replacement to a computer laboratory activity. They still felt that computer laboratory activity conducted by a lecturer is also an important delivery system in imparting knowledge. Therefore, they stressed that a computer laboratory activity can be improved by coupling it with computer-based learning method. This is because, they added, human touch is an important element in the learning process.

Race (1994) listed how people (adults) approach learning using computer-based learning materials in relation to his own model of learning:

- Wanting (students are motivated to learn with the availability of multimedia components such as stimulating visual and digital video).
- Learning by doing (students are able to interact with the computer, example by making decisions, entering commands and selecting appropriate choices (menu) based on its importance or usefulness).
- Learning from feedback (students will receive feedback instantaneously based upon decisions made either by typing on the keyboard or clicking using the "friendly" mouse).
- Digesting (students can have more time to digest certain chunks of information that are not fully grasped yet by repeating the delivery of particular information).

Coincidently, these adult students did follow the Race's model of learning – wanting, doing, feedback and digesting - learning when using the courseware (Percival, Ellington and Race, 1993). All the students, despite different knowledge level and different learning styles, said that they first chose the topic that they were interested in, or wanted to learn (wanting). After moving the mouse's cursor to the selected topic (doing), the information related to the topic was presented to them (feedback). Soon after they have finished comprehending the material being presented to them (digesting), they move on to another topic. According to them, similar processes were repeated until they exit the package.

Concluding Remarks

Both lecturers and students gave positive remarks towards the use of CD-ROMs in teaching and learning session. These findings thus suggest that lecturers should incorporate the use of CD-ROMs inside a computer laboratory activity. It further suggests that CD-ROMs should be used outside a computer laboratory activity to assist students' self-directed learning.

However, there are some limitations to this study that include small sample size. Future studies should also incorporate other strategies of data collection such as observations.

In conclusion, it should be emphasized that when moving into the development of flexible and continuing education learning materials such as printed modules, CD-ROMs and e-learning portals, academic staffs should allocate some time and effort. By developing, implementing and

providing effective and efficient analogue and digital learning materials of all sorts, lecturers can perform what they do best – helping their students to learn. Besides catering for students with different learning styles and capabilities, multimedia-based learning materials for example, makes learning more exciting for many students. These interactive and flexible learning materials can also address the need of the weak and advanced students; hence continuing to encourage their interest in a particular subject.

The authors feel that there are several reasons to be optimistic about the results of the study. Students will normally learn when they need to know something and when a topic is personally relevant and help them to learn effective and efficiently. The authors thus strongly believe that there should be a need to better support efforts for self-directed and flexible learning, anywhere, any time, across the life span.

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THEME 3: EDUCATIONAL POLICY AND ORGANIZATIONAL LEADERSHIP

THE RELATIONSHIP OF SELF-CONCEPT AND COMMUNICATION SKILLS TOWARDS ACADEMIC ACHIEVEMENT AMONG SECONDARY SCHOOL STUDENTS IN JOHOR BAHRU

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ABSTRACT:

The purpose of this study is to examine the relationship of self-concept and interpersonal communication skills to academic achievement. 320 students from eight schools in Johor Bahru were picked at random using the simple random method.

The assessment instruments used in this study were the "Tennesse Self–Concept Scale" (TCS) and the Malay version of " Interpersonal Communication Skills Inventory" (ICSI). The reliability level of the assessment instruments was 0.7498(TSCS) and 0.7587 from the pilot study done on a group of twenty respondents. The data was analyzed using the Pearson's correlation and descriptive statistics. The students' levels of self-concept and interpersonal communication skills were identified. The levels of students' self-concept were positive, average or negative while the student's interpersonal skills were high, average or low. The students' PMR examination results were used as the academic achievement indicator. The results indicated that the majority of the students possessed the average level of self-concept and interpersonal communication skills. Self-concept was found to correlate quite significantly with interpersonal communication skills but it

was found that self-concept does not correlate significantly with academic achievement. Suggestions were put forth to improve the students' interpersonal communication skills and their self-concept. One of the suggestions is that communication skills should be introduced as a subject in the school curriculum from the primary level. This will not only develop a student's self-confidence but also enhance his self-concept.

INTRODUCTION

Students generally strive for academic excellence. Success or failure in the academic arena can be either a good or bad experience for a student. Academic performance is in general the yardstick used to measure the personal success of an individual. Academic excellence in public examinations such as the PMR (Lower Secondary Assessment) for instance is the success indicator of a student. Excellent academic performance is the hope and pride of each and every student. Besides, it is also the hope of parents, teachers and educational institutions at large.

It is the norm for society and educational institutions in Malaysia to promote academic excellence through cognitive ability and learning style or IQ (mental intelligence). Binder, Jones and Strogwig (1970): Thorndike and Hagan, 1969 in Watson and Monroe (1990) show that there is a 0.50 to 0.70 relationship between IQ and academic achievement. They stated that 50 percent of the variable in academic performance could be forecast through IQ.

Self–concept, interpersonal communication skills and academic performance can be considered as three separate components. It is easy to assess a student's academic performance through the grade achieved in tests and examinations. However, assessing a student's self–concept which involves feelings and perceptions of an individual is much more subjective and thus a more difficult task. Interpersonal communication skills of an individual are easier to assess as a student's ability to communicate can readily be determined by the way he interacts with his teachers and peers. However, it is not an easy task to assess the level of interpersonal communication skills of a student as the interaction between students and their peers and students and their teachers occurs only in the classroom in the school.

It is essential for an individual to acquire interpersonal communicational skills to communicate, discuss and exchange ideas effectively with his teachers and peers. With the current trends in the school system, which emphasizes the student's ability to express himself in the teaching and learning process, it is mandatory that a student acquire interpersonal communication skills. A student who lacks interpersonal communication skills will not only experience problems communicating but also during the learning process as discussion forms the very basis of today's teaching and learning process. This inadequacy will indirectly erode a student's confidence and self–concept thus affecting his academic performance.

Excellent academic performance is the main target of every student and school. For excellent academic performance, a student ought to acquire an understanding and a grasp

of the subject content. This process of acquiring a command and an understanding of the subject content does not depend on merely on memory work but on the level of self–concept and the ability to interact effectively. A high level of self–confidence coupled with effective learning techniques will lead to excellent academic performance. Self–concept and interpersonal communication skills form the basis of self–confidence.

A student's confidence and the ability to express him and interact in the classroom are closely related to self–concept. According to Coyle (1993), the ability

For interpersonal communication will affect the self–concept of an individual. A student assesses himself by the perception the teachers have of him. This perception is based on his ability to interact with others in the classroom. Teachers tend to give good assessment to students who interact well in the classroom. This in turn increases their self–confidence leading to a higher level of self–concept.

The current democratic teaching style encourages students to interact with the teachers as well as their peers in the classroom. The interpersonal communication skills the students possess make them more self confident and indirectly influence their academic performance.

PROBLEM STATEMENT

It is not that students do not have ideas or do not know how to answer the teacher's questions, but it is their inability to express themselves due to their lack of communicational skills and the lack of courage for fear that they will be assessed by their teachers and peers especially if their opinion is not accurate and fails to meet the teacher's requirements. This situation is the result of the lack of interpersonal communication skills of a student and a negative or low level of self–concept.

It is essential for a teacher to understand the level of self–concept of a student in order to employ an effective approach during the teaching and learning process, for instance when questioning students. Besides, communicating in the classroom plays an important role in shaping a student's self–concept. A student with communication skills can communicate effectively with his teachers and peers both in and outside the classroom.

STUDY OBJECTIVE

This study is based on a few objectives that have been identified:

1. To examine the types of a student's self–concept.

2. To examine the level of interpersonal communication skills of a student.

3. To assess the level of academic achievement of a student.

4. To analyse the correlations between the above three elements.

5. To analyse the correlations between the students background to the three elements stated above.

HYPOTHESIS

The hypothesis of this study are as follows:

Null Hypothesis 1: There is no significant relationship between self–concept and interpersonal communication skills.

Null Hypothesis 2: There is no significant relationship between self–concept and academic achievement.

Null Hypothesis 3: There is no significant relationship between interpersonal communication skills and academic achievement.

Null Hypothesis 4: There is no significant relationship between parent's level of education with self–concept and a student's academic achievement.

Null Hypothesis 5: There is no significant relationship between parent's level of education with interpersonal communication skills and academic achievement.

Null Hypothesis 6: There is no significant relationship between the level of parent's income with   self–concept and academic achievement

Null Hypothesis 7: There is no significant relationship between the level of

parent's income with interpersonal communication skills.

and academic achievement

Null Hypothesis 8: There is no significant relationship between a student's

position among siblings with self–concept and academic

achievement.

Null Hypothesis 9: There is no significant relationship between number of siblings

with interpersonal communication skills and academic

achievement.

THE SIGNIFICANT OF THE STUDY

This study hopes to benefit teachers who play an important role in building a student's interpersonal communication skills especially during the teaching and learning process in the classroom. A teacher is able to formulate a suitable approach to improve a student's interpersonal communication skills after having identified his level of self–concept.

Parents too can help their offspring's level of self–concept and interpersonal communication skills by paying more attention to their children at home and encouraging them to improve their academic performance.

The Ministry of Education can plan strategies to improve students' self–concept and interpersonal communication skills through the curriculum and education syllabus in school to ensure excellent academic performance. It is hoped that with elements of interpersonal communication skills will integrated into the learning process by the Ministry of Education and will in time be stretch across the curriculum as is the case of moral values and critical and creative thinking skills.

LIMITATIONS

The self–concept dimensions used in this study cover; the physical self–concept, moral ethic self–concept, personal self–concept, family self–concept, social self–concept, behavioral self–concept, identity self–concept and satisfaction self–concept. Besides, negative self–concept, average self–concept and positive self–concept are also looked into as these will have an impact on academic performance and an individual's ability to communicate. All self–concept dimensions mentioned above are interwoven into the questionnaire.

The study samples are limited to form four students as they have taken the PMR examination which is the indicator for academic achievement in this study. Random samples have been taken from ten schools in the Johor Bharu area.

STUDY DESIGN

This study was carried in the form of a descriptive survey focusing on the relationship of self–concept and interpersonal communication skills with academic achievement of form four students of several schools in the Johor Bharu area.

This survey serves to explain the correlations between self–concept with academic achievement and the relationship between interpersonal communication skills and academic achievement. A pilot study was carried out to test the validity and reliability of the instruments used for the actual survey. The data was collected via a questionnaire administered by the class teacher to the respondents.

POPULATION AND SAMPLES

A total population of 10,694 form four students from 39 government–aided schools in the Johor Bharu District. A total of 370 students from ten different schools were picked at random as study samples. The sample size of 370 was determined by the Table for Sampling Purposes by Krejcie and Morgan (1970)

PILOT STUDY

The aim of the pilot study was to test the validity and reliability of the questionnaire used in the actual study. 20 students who were not the actual respondents were picked at random from a chosen school. The outcome of the pilot study showed that a few items in the questionnaire had to improved due to the low mean value compared to the other items. The outcome of the reliability of section B of the questionnaire was 0.7498 while section C was o.7587.

DATA ANALYSIS

The correlation analysis was used to examine the correlations between the variables in the study namely the relations between self–concept and interpersonal communication skills with academic achievement. The relationship   between self–concept and interpersonal communication skills with a student's background and academic achievement.

To test the hypothesis that was put forth, the analysis of correlation was used because all the hypothesis examined only the relationship between the variables. A significant level of 0.05 was determined to test the hypothesis. According to Syed Arabi Idid (1998), the significant level usually employed in the study of social sciences is 0.05.

ANALYSIS OF THE FINDINGS

The findings of the study are tabulated to show the percentage of frequency. The details are presented in accordance to the sequence in the survey. This chapter also tests the study hypothesis to determine the acceptance or rejection of the null hypothesis. The level of significance used to determine the acceptance or rejection of the null hypothesis at 0.05.

FINDINGS AND ANALYSIS OF THE TOTAL SELF-CONCEPT

Table 1: Distribution of Respondents based on Level of Self-concept

Level of Self-concept	Number	Percentage
High or Positive	3	0.1
Average	317	99.1
Low or Negative	0	0
Total	320	100

The findings on self-concept as a whole showed that of the 320 respondents,317 or 99.1% possessed the average level of self-concept, 3 or 0.9% possessed the positive or high level of self-concept while non of the respondents possessed the low level of self-concept.

FINDINGS AND ANALYSIS OF THE PHYSICAL SELF-CONCEPT

Table 2: Distribution of Respondents based on the Physical Self-concept

Level of Physical Self-concept	Number	Percentage
High or Positive	53	171
Average	267	83
Low or Negative	0	0
Total	320	100

The findings showed that the physical dimension of self-concept was mostly at medium level whereby 267 or 83% out of 320 were included in the average category.

53 respondents or 17% had positive levels of physical self-concept while non of the respondents had negative self-concept.

FINDINGS AND ANALYSIS OF THE MORAL ETHICS SELF-CONCEPT

Table 3: Distribution of Respondents based on the Moral Ethics Self-concept

Level of Moral Ethics Self-concept	Number	Percentage
High or Positive	0	0
Average	305	95
Low or Negative	15	5
Total	320	100

The study showed that the Moral Ethics of respondents as a whole was at the average level where 305 respondents or 95% possess this self-concept. While 15 respondents or

5% were at the negative level, non of the respondents were at the positive level of the moral ethics concept.

FINDINGS AND ANALYSIS OF THE PERSONAL SELF-CONCEPT

Table 4: Distribution of Respondents based on the Personal Self-concept

Level of Personal Self-concept	Number	Percentage
High or Positive	15	5
Average	305	95
Low or Negative	0	0
Total	320	100

The findings of the study on Personal Self-concept showed that 15or 5% of respondents possessed the positive level of personal self-concept, 305 or 95% at the average level while non of the respondents possessed the low level of personal self-concept.

FINDINGS AND ANALYSIS OF THE FAMILY SELF-CONCEPT

Table 5: Distribution of Respondents based on the Family Self-concept

Level of Family Self-concept	Number	Percentage
High or Positive	138	43
Average	179	56
Low or Negative	3	1
Total	320	100

The table shows the findings of the respondents' level of the Family Self-concept. 138 respondents or 43% had the positive level of family self-concept, 3 or 1% had the negative level family self-concept while 17 9 or 56% have the average level of family self-concept.

FINDINGS AND ANALYSIS OF THE SOCIAL SELF-CONCEPT

Table 6: Distribution of Respondents based on the Social Personal Self-concept

Level of Social Self-concept	Number	Percentage
High or Positive	30	9
Average	280	88
Low or Negative	10	3
Total	320	100

The findings of the study showed that 30 respondents or 9% possessed the positive level of social science self-concept, 280 or 88% of respondents possessed the average level of self-concept and 9 or 3% possessed the low level of self-concept.

FINDINGS AND ANALYSIS OF THE BEHAVIORIAL SELF-CONCEPT

Table 7: Distribution of Respondents based on the Behavioral Self-concept

Level of Behavioral Self-concept	Number	Percentage
High or Positive	123	38
Average	192	60
Low or Negative	5	2
Total	320	100

The table above shows that 123 or 53% of respondents possessed the positive level of behavioral self-concept, 192 or 60% at the average level of behavioral self-concept and 5 or 2% possessed low levels or negative behavioral self-concept.

FINDINGS AND ANALYSIS OF THE IDENTITY SELF-CONCEPT

Table 8: Distribution of Respondents based on the Identity Self-concept

Level of Identity Self-concept	Number	Percentage
High or Positive	22	7
Average	269	84
Low or Negative	29	9
Total	320	100

The findings showed that 22 respondents or 7% were at the positive level of Identity self-concept, 267 or 84% at the average level and 29 or 9% at the low level.

FINDINGS AND ANALYSIS OF THE SATISFACTION SELF-CONCEPT

Table 9: Distribution of Respondents based on the Satisfaction Self-concept

Level of Social Satisfaction Self-concept	Number	Percentage
High or Positive	44	14
Average	249	78
Low or Negative	27	8
Total	320	100

Table 9 showed that 44 or 14% of the respondents were at the positive level of satisfaction self-concept, 249 or 78% were at the average level while 27 or 8% of respondents were at the negative level of self satisfaction concept.

FINDINGS AND ANALYSIS OF THE LEVEL OF INTERPERSONAL COMMUNICATION SKILL

Table 10: Distribution of Respondents based on the Level of Interpersonal Communication Skill

Level of Interpersonal Communication Skill	Number	Percentage
High or Positive	46	14.4
Average	272	85
Low or Negative	2	0.6
Total	320	100

The findings on the level of Interpersonal Communication Skills showed 46 or 14.4% of the respondents were at the high level of Interpersonal Communication Skills, 272 or 85% were at the average level while 2 or 0.6% were at the low level of Interpersonal Communication Skills.

ANALYSIS OF THE RELATIONSHIP BETWEEN SELF-CONCEPT AND INTERPERSONAL COMMUNICATION SKILLS

Hypotheses Testing

The Pearson Correlation Analysis was employed to test the acceptation or rejection of the null hypotheses as the hypotheses was put forth to show only the relationship between variables in the study.

Testing Null Hypotheses One: There is no significant relationship between self-concept and interpersonal communication skills.

Table 11: The Relationship Between Self-concept And Interpersonal Communication Skills

Relationship Between Variables	r	P	N
Self-concept with Interpersonal Communication Skills	0.239	0.000	320

or P<0.05

The findings of the correlation analysis showed that there is a significant relationship between self-concept and interpersonal communication skills where r=0.239, P<0.01. Therefore, the first null hypotheses which stated that there is no significant relationship between the self-concept with interpersonal communication is rejected.

Testing Null Hypotheses Two: There is no significant relationship between self-concept and academic achievement.

Table 12: The Relationship Between Self-concept And Academic Achievement

Relationship Between Variables	r	P	N
Self-concept with Interpersonal Communication Skills	−0.56	.317	320

or P<0.05

The analysis showed that there is no significant relationship between self-concept and academic achievement. The relationship shows a low inverted relationship or r=−0.56, P<0.317.This means that the null hypotheses which states that there is no significant relationship between self-concept and academic achievement is accepted.

Testing Null Hypotheses Three: There is no significant relationship between interpersonal communication skills and academic achievement.

Table 13: The Relationship Between Interpersonal Communication Skills And Academic Achievement

Relationship Between Variables	r	P	N
Interpersonal Communication Skills and Academic Achievement	0.146	0.000	320

or P<0.05

Table 13 shows that there is a significant relationship between interpersonal communication skills and academic achievement although the relationship between the two is weak or r=−0.146, P<0.000. Therefore, the null hypotheses is rejected and the

alternative hypotheses that there is a significant relationship between interpersonal communication skills and academic achievement is accepted.

Testing Null Hypotheses Four: There is no significant relationship between parents level of education with self-concept and academic achievement.

Table 14: The Relationship Between Parents Level of Education with Self-concept and Academic Achievement.

Relationship Between Variables	r	P	N
Parents Level of Education with Self-concept	−0.111	0.048	320
Parents level of Education With Academic Achievement	0.260	0.000	320

or P<0.05

There is clearly a significant relationship between the parents' level of education and academic achievement although the relationship is weak that is r=0.260, P<0.000. The relationships between parents' level of education and self-concept shows a significant but weak inverse correlation that is r=-0.111, P<0.48. Therefore, the null hypotheses which states that there is no significant relationship between parents level of education with self-concept and academic achievement is rejected.

Testing Null Hypotheses Five: There is no significant relationship between parents level of education with interpersonal communication skills and academic achievement.

Table 15: The Relationship Between Parents Level of Education with Interpersonal Communication skills and Academic Achievement.

Relationship Between Variables	r	P	N
Parents Level of Education with Interpersonal Communication Skills	−0.139	0.013	320
Parents level of Education With Academic Achievement	0.260	0.000	320

or P<0.05

The correlation analysis showed that the null hypotheses that states there is no significant relationship between parents level of education with interpersonal communication skills and academic achievement is rejected. This is because there is a significant relationship between parents' level of education and interpersonal communication skills although the relationship is weak that is   r=0.1396, P=<0.13.

Although the relationship between parents' level of education   and academic achievement is weak, there is a significant relationship between the two or r=0.260, P<0.000.

Testing Null Hypotheses Six: There is no significant relationship between parents level of income with Self-concept and academic achievement.

Table 16: The Relationship Between Parents Level of Income with Self-concept and Academic Achievement.

Relationship Between Variables	r	P	N
Parents Level of Income and Self-concept	0.015	0.792	320
Parents level of income And Academic Achievement	0.242	0.000	320

or P<0.05

The level parents' income and academic achievement shows a significant but weak relationship that is r =0.242, P<0.000. The null hypotheses is therefore, rejected. On the other hand, the relationship between the parents' level of income and self-concept does not show a significant relationship that is r=0.150, P>0.792. The hypotheses is therefore accepted.

Testing Null Hypotheses Seven: There is no significant relationship between parents' level of income with interpersonal communication skills and academic achievement.

Table 17: The Relationship Between Parents Level of Income with Interpersonal Communication Skills and Academic Achievement.

Relationship Between Variables	r	P	N
Parents Level of Income with Interpersonal Communication Skills	.146	0.000	320
Parents level of Education With Academic Achievement	0.242	0.000	320

or P<0.05

The correlation analysis showed that there is a significant relationship between parents' level of income with academic achievement however the relationship is weak or r=0.146,

P<0.000. The relationship between parents' level of income and interpersonal communication skills also shows a significant but weak relationship that is r =0.242, P<0.000. The hypotheses is therefore rejected.

Testing Null Hypotheses Eight: There is no significant relationship between a student's position among siblings with self-concept and academic achievement.

Table 18: The Relationship Between a Student's Position among Siblings with Self-concept and Academic Achievement.

Relationship Between Variables	r	P	N
a Student's Position among Siblings with Self-concept	-.035	0.527	320
A Student's Position among Siblings with Academic Achievement	-.129	0.021	320

or P<0.05

There is a weak, inverse and insignificant relationship between a student's position among siblings and self-concept that is r =-0.035, P<0.527. The null hypotheses is therefore, accepted. The relationship between a student's position among siblings and academic achievement however shows a significant but weak and inverted relationship that is r =-0.129 P<0.021.Therefore, the null hypotheses is rejected.

Testing Null Hypotheses Nine: There is no significant relationship between number of siblings with interpersonal communication skills and academic achievement.

Table 19: The Relationship Between number of siblings with interpersonal communication skills and academic achievement.

Relationship Between Variables	r	P	N
Number of siblings with Interpersonal communication skills	0.027	0.633	320
Number of siblings with Academic Achievement	-.039	0.488	320

or $P<0.05$

The correlation analysis shows that there is no significant relationship between number of siblings with interpersonal communication skills. It also shows a weak relationship that is r =0.027, P<0.633. The number of siblings and academic achievement show an inverted and insignificant relationship that is r =-0.039, P<0.488. Thus, the null hypotheses is rejected.

CONCLUSION AND PROPOSALS

The outcome of the survey shows that all the objectives were fulfilled and the survey was satisfactory as no objective was overlooked in the study. All the hypotheses put forth were tested and showed that four null hypotheses as follows were accepted.. (1) There is no significant relationship between self-concept and academic achievement. (2) There is no significant relationship between the position of a student among his siblings ands self-concept. (3) There is no significant relationship between parents' income and self-concept.. (4) There is no significant relationship between the total number of siblings with interpersonal communication skills and academic achievement.

On the whole, the outcome of the study shows that there is a weak relationship between the variables put forth in this study. The outcome of the study showed unexpected results namely there is no significant relationship between self-concept and academic achievement: there is no significant relationship between the total number of

siblings and interpersonal communication skills: and between the total number of siblings and academic achievement.

Students, on the whole, have a moderate dimension of self-concept. The dimensions of self-concept that a student possesses which have a positive outcome include physical self-concept, family self-concept and behavioral self-concept. This is so because the above mentioned self-concepts are positive compared to other self-concepts like moral ethic self-concept, social self-concept, identity self-concept, satisfaction self-concept and personal self-concept as the number of students who possess positive self-concept in these dimensions is small. However, the levels of the above self-concept are on the whole average.

The level of interpersonal communication skills a student possesses are generally average although there are a few students who possess good communication skills.

The relationship between self-concept with interpersonal communication skills has shown positive results as there is a significant relationship between the two. However, there is no relationship between academic achievement and self-concept.

It can, therefore, be concluded that the outcome of the study shows a positive result and this is representative of the form four students in the Johor Bahru area who comprised the population of the study as a total of 320 respondents has fulfilled the requirement of the minimum sample number to produce a reliable outcome of the study.

SUGGESTIONS

Self-concept and Interpersonal Communication Skills are two elements which direct or indirectly influence the life of an individual. The researchers therefore propose these suggestions:

1. The Ministry of Education or The State Education Department draw up a plan where a subject on interpersonal communication skills is included in the school education syllabus.

2. Teachers are given the exposure on the importance of interpersonal communication skills. They are to attend courses, workshops, or seminars on interpersonal communication skills. It is vital that this step is taken because these teacher will direct or indirectly channel their acquired knowledge to their students.

3. There are numerous factors that influence a student's self-concept. One of these factors is their teachers who are the student's role model. The Ministry of Education should therefore be more stringent when drawing up the criteria for the selection of trainee teachers. Thus only the trainee teachers who possess positive self-concept are accepted. The criteria for the level of self-concept can be determined by administering the self-concept test. Although results may not be a hundred percent accurate, it is invaluable when selecting the ideal candidate.

4. The activities carried out in schools should be planned as such where the   students' self-concept can be enhanced. The setting up of Elocution and Debating Clubs should

be encouraged as these activities help mould students into having a more positive self-concept as well as to be more critical in their thinking. Elocution contests and debates should therefore be made an annual program at both primary and secondary level.

5. Parents should be actively involve with the Parents and Teachers Association (PTA) to enable them to cooperate with the school to plan activities where closer relationships can be fostered among parents , teachers and students. These close relationships will indirectly influence the students' attitude and behavior towards their studies. Problems faced by the school such as disciplinary problems, students who are unmotivated and low academic performances can thus be conquered if both teachers and parents join forces.

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PROCEEDINGS   THEME 1   THEME 2   THEME 3   THEME 4

NON–FORMAL EDUCATION FOR ENHANCING SELF–DIRECTED LEARNING CAPABILITIES OF THAI PEOPLE IN THE YEAR OF B.E. 2555

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Abstract

The main purposes of this research are :

3) To study the expert 's viewpoints on the future image of non-formal education provision and the characteristic of self-directed learning capabilities of people according to Rosemary S. Caffarella

4) To study a proper means of non-formal education in the future for enhancing self-directed learning capabilities.

The Research Methodology :

The research procedure consisted of a study carried out in the next ten years as a prediction for a plan of non-formal education provision for enhancing self-directed learning capabilities.

1.Ask and interview experts about defining self directed learning capabilities and their characteristics.

2.Questions asking experts' viewpoints were carried out by Delphi Technique with an aim to establish a future trend providing non-formal education for enhancing self-directed learning capabilities of Thai people in the year of B.E. 2555. The sampling groups included experts in self-directed learning and self-directed non-formal education as well as people in community leader groups both formal and informal.

3.Questionnaires were utilized to ask for proper means of non-formal education provision using the Delphi Technique.

4.Application of Rosemary S. Caffarella 's viewpoints in "Planning Programs for Adult Learners" written in 1994 is categorized into 11 steps as follows: 1) Establishing basis for the planning process 2) Identifying program ideas 3) Sorting and prioritizing 4) Developing program objectives 5) Preparing for the transfer of learning 6) Formulating evaluation plans 7) Determining formats, and staff 8) Preparing budgets and marketing plans 9) Designing instructional plans 10) Coordinating facilities and on-site events 11) Communicating the value of the program

5.It is estimated that non-formal education program will definitely assist learners to enhance self-directed learning in consistent with according to the review of literature and non-formal Educators' viewpoints, the characteristics of self-directed learning capabilities comprise 14 essential issues as follow:

1) Be able to set up the need 2) Be able to plan 3) Be able to generate motivation and self-monitoring 4) Be able to set up learning goals 5) Be able to choose appropriate learning methods and learning resource centers. 6) Ability knowledge and basic skills in listening, speaking, reading and writing.7) Have self responsibility 8) Be able to open to new learning opportunities 9)Have self-acceptance and self esteem 10) Be able to evaluate self-learning 11) Have creative and critical thinking 12) Have positive belief toward self-directed learning capabilities 13) Have Communicative skill 14) Be able to learn with others

5. The researcher used some answers listed in the experts' document to ask the educators, non-formal education experts as well as the local people from communities in Bangkok Metropolitan.

to express their viewpoints through focus group discussion.

Non-formal education provision for enhancing self-directed learning capabilities of Thai people in the year of B.E. 2555 is expected to provide its target groups to acquire information in future image of non-formal education provision for enhancing self-directed learning of people as a means to make a decision in establishing educational policies. In addition, personnel concerned are able to show readiness to provide non-formal education for enhancing self-directed learning; it is a means to establish Thai people 's potentiality in order to live in a successful and happy manner.

Rationale and Significance of Problem

It is an auspicious occasion in education as Thailand has approached the millenium with the proclamation of education reform and Education Act in 1999 which emphasizes on man development based on three principles as follows:

1) Education for all 2) Society participation in education 3) Development of context and learning process on a continuous basis. Moreover, the content in the Education Act obviously reflects that the government has considerably focused on non-formal education, flexibility in models and agencies provided education, equivalency programs of learning (between formal and non-formal education systems) and facilities to provide education, media and infrastructures necessary for utilizing technology for education. All of these approaches are beneficial to education and learning capability of people in non-formal education system.   According to some viewpoints of the Ninth National Economic and Social Development Plan (B.E.2545-2549), based on visions of Thai society in the next 20 years, problem of social sectors at all levels were synthesized and it was found out that particularly for man development aspect, the quality of Thai

people education has not been advanced as it should be. The educational level of Thai people aged over 13 years, approximately 70 percent, of them is at elementary and lower. Additionally, our education system and learning process have not been adapted with existing changes. Apparently, they can not produce qualified people with desirable ethics.

Education in Thailand still has numerous problems. For example the number of qualified personnel in science and technology is quite limited. As a result, innovation can not be fully developed and technology can not be utilized effectively either. These problems definitely obstruct Thai people's capabilities of self-development in accordance with economic and social changes. This affects potentiality increase in competition with foreign countries and maintenance of happiness and security in the society.

Therefore, the Ninth National Economic and Social development Plan (B.E.2545-2549) has set up a development plan of local wisdom and learning societies which will provide Thai people with learning opportunities and learning process development. This enables everyone to have knowledge and be aware of upgrading himself on a continuous basis in such a way that he can adapt himself effectively and be competitive with other people in the society forever.

According to the reasons previously mentioned, non-formal education has considerably improved its viewpoints in congruent with education reform schemes and the Ninth National Economic and social development Plan (B.E. 2545-2549). With the main purpose of elevating quality of life and society of people, it has a strong belief that everyone has potentiality to develop himself and his society. Education is conducted on the main principle that all learners are able to learn and develop themselves properly, and learners are regarded the most important. Thus, education processes must enhance

learners to be able to develop themselves naturally and potentially. Education must be a learning process undertaken on a continuous basis so that learning process undertaken on a continuous basis so that learners are able to think wisely, adjust themselves properly, tackle problems ethically and confront with situations existing in various life spans consciously.

Presently, it has been accepted that non-formal education provided for adults and education for all to urge people to pay more attention to self-directed learning. It emphasizes learners on self-directed learning and encourages them to have creative idea to acquire further knowledge. Thus, the learners must set up a plan to study by themselves until they complete the learning process. By realizing the importance of self-directed learning, various educational institutions have developed their own educational processes to promote self-directed learning by conducting teaching and learning process in various fields as well as learning resources in such a way that learners have more choices to learn by themselves according to their needs and skills. Additionally, learners should possess some characteristics. These include self-directed learning and its development. In Thai society, self-directed learning does not occur to everyone, but it is possible to exist in a situation feasible to development.

According to reasons previously mentioned, the researcher is interested in studying the provision of non-formal education for enhancing self-directed learning capabilities of Thai people in the year of B.E.2555. The study in the future will assist us to view feasible events or behaviors in the future as well as methods of self-directed learning. This type of learning can be undertaken

Individually, in-groups by distance education, in enterprises and from various kinds of mass media systems which learners can either learn by themselves or with instructors.

We will see that adult learners are able to employ numerous ways of self-directed-learning. In addition, it is believed that the development of self-directed learning capabilities will result in personal advancement in various aspects such as learning desire, seeking for appropriate reasons and self-directed learning. All of these will be interrelated due to each individual 's self-directed learning. Importantly, this learning method is consistent with the main concept of learner-centered education suitable with adult maturity in non-formal education system. This self-directed learning skill will be appropriate with the present society in which people have more educational opportunities according to their interests and needs. People are able to use such skill as a tool to seek for further knowledge and advancement all the time. Furthermore, a self-directed person is regarded as a proper source of human development, which enables him to lead his life happily according to his needs.

Therefore, self –directed learning is an appropriate method for adults, which is absolutely consistent with education system in Thailand, Education Act in 1999 and adults' way of life. If Thai people are capable of developing self –directed characteristics potentially, it will help them to have creative thinking with or without other people 's assistance. It also enables them to analyze their learning desire, set up their learning goals, identify learning resource persons ,learning materials, selection of appropriate learning methods, as well as learning evaluation. All of these factors enable people to develop the ability in thinking and decision making, leading to civil society development.

Provision of non-formal education according to Rosemary S. Caffarella's viewpoints

The researcher has applied Rosemary S. Caffarella's ideas in "Planning Programs for Adult Learners" comprising 11 steps as follows:

1.Establishing Basis for the Planing Process

There are two types of factors concerning planning : internal and external. Internal factors include man, culture, and community. External factors include relationship among communities themselves, and between a community and an external agency; politics; economy; society, information as well as building a solid base of support from personnel and agencies for making sure that the program will be accomplished.

2.Identifying Program Ideas

In order to acquire essential contents and ideas, it is necessary to have certain source of such ideas. There are learners, NFE educators, agencies and communities concerned. Methods to obtain ideas from those source are observations, questionnaires, surveys, Interviews etc.

3.Sorting and prioritizing

The ideas obtained are prioritized by taking into consideration who should establish or be concerned with. These people include community leaders, teachers etc. Construction of prioritizing criteria in various aspects is also considered such as numbers of population affected, amount of resources implemented, haste etc.

4.Developing program objectives

Development of program objectives should have a distinctive relationship among objectives, problems and learners' needs. Are these objectives applicable and able to be evaluated?

5.Preparing for the transfer of learning

Some important factors must be considered to transfer learning. These include program participants, design, management, and content; switching of jobs as required, agency context, and forces from communities and societies.

6. Formulation Evaluation plans

It needs to be relevant to objectives. It should be considered about specification of methods evaluated, setting up methods of data collection, data analysis, type of data , data collection, determining criteria used in the program and bringing suggestions to improve the program.

7.Determining format and staff

Determining of suitable format means setting up a self- directed learning format. This includes identification roles of the staff in project planning and management.

8.preparing budgets and marketing plans

This includes revenue sources and estimated cost for carrying out the program as well as planing for program dissemination.

9.Designing instructional plans

This includes improvement of learning objectives, selection and prioritization of content, selection of appropriate teaching techniques, development of teaching interval.

10.Coordinating Facilities and On-site Events

Preparation of facilities such as selection of places, design of classrooms and teaching materials depends on objectives of each type of teaching activities, methods of teaching, learner group, teachers' aptitudes, as well as coordination of the program. This includes gathering authorities concerned in the program, material check-ups, documents and incurred expenditures.

11.Communicating the value of the program

It is a program evaluation report comprising the following factors: functions, scope, audience, content, and format.

The idea of such education program provision is interrelated with men, agencies and communities

Characteristics of self directed learning capabilities of people

According to review of literature, a non-formal education educators's viewpoints, 8 experts' interview and the NationalEducation Scheme The characteristics of self-directed learning capabilities comprise 14 essential issues as follows:

1) Be able to set up the need

2) Be able to plan

3) Be able to generate motivation and self-monitoring

4) Be able to set up learning goals

5) Be able to choose appropriate learning methods and learning resource centers

6) Ability knowledge and basic skills in listening, speaking, reading and writing.

7) Have self responsibility

8) Be able to open to new learning opportunities

9) Have self-acceptance and self esteem

10) Be able to evaluate self-learning

11) Have creative and critical thinking

12) Have positive belief toward self-directed learning capabilities

13) Have Communicative skill

14) Be able to learn with others

This research has also applied some trends in the characteristics of people in Thai society.

The Purpose of Study

The main purposes of "the Research of Non-formal education for Enhancing Self –directed Learning Capability of Thai People in the Year of B.E. 2555" are as follows:

1 To study the expert 's viewpoints on the future image of non-formal education provision according to Rosemary S. Caffarella and the characteristic development of self-directed learning capabilities.

2.To study proper means of non-formal education in the future for enhancing self –directed learning capabilities.

The Research Methodology

1.Ask and interview experts about defining self directed learning capabilities and their characteristics.

2.Application of Rosemary S. Caffarella 's viewpoints in "Planning Programs for Adult Learners" written in 1994 is categorized into 11 steps as follows: 1) Establishing basis for the planning process 2) Identifying program ideas 3) Sorting and prioritizing 4) Developing program objectives 5) Preparing for the transfer of learning 6) Formulating evaluation plans 7) Determining formats, and staff 8) Preparing budgets and marketing plans 9) Designing instructional plans 10) Coordinating facilities and on-site events 11) Communicating the value of the program

2.It is estimated that non-formal education program will definitely assist learners to enhance self-directed learning capabilities in consistent with according to the review of literature and non-formal Educators' viewpoints, the characteristics of self-directed learning capabilities comprise 14 essential issues as follow :1) Be able to set up the need 2) Be able to plan 3) Be able to generate motivation and self-monitoring 4) Be able to set up learning goals 5) Be able to choose appropriate learning methods and learning resource centers. 6) Ability knowledge and basic skills in listening, speaking, reading and writing.7) Have self responsibility 8) Be able to open to new learning opportunities 9) Have self-acceptance and self esteem 10) Be able to evaluate self-learning 11) Have creative and critical thinking 12) Have positive belief toward self-directed learning capabilities 13) Have Communicative skill 14) Be able to learn with others

3.Asking experts for viewpoints using the Delphi Technique

4.The sampling groups comprise of experts in self-directed learning and self-directed learning and self-directed education provision as well as people who are in community leader groups, formal and informal.

5.Use questions listed in a document to ask education experts and non-formal education experts as well as local people from communities in Bangkok Metropolitan to express their viewpoints through focus group discussion.

Definitions Used in the Research

Non-formal education means a systematic education process in which an individual learner or group of learners can learn willingly. Such learning is conducted by any sectors or persons interested in organizing educational activities with the main purpose of serving those who want to learn anything they intend to according to its learning objectives for a short period of time. It is a self-investigated learning

Self-directed learning capabilities means management with a certain purpose; well self-learning plan; responsible conduct and self-control; self-learning evaluation for knowledge and skill development; and attitude according to goals set up. Hence, the characteristics of self directed learning capabilities comprise 14 essential factors as follows: 1) Be able to set up the need 2) Be able to plan 3) Be able to generate motivation and self-monitoring 4) Be able to set up learning goals 5) Be able to choose appropriate learning methods and learning resource centers. 6) Ability knowledge and basic skills in listening, speaking, reading and writing.7) Have self responsibility 8) Be able to open to new learning opportunities 9) Have self-acceptance and self esteem 10) Be able to evaluate self-learning 11) Have creative and critical thinking 12) Have positive belief toward self-directed learning capabilities 13) Have Communicative skill 14) Be able to learn with others

People means those who are beyond 15 years old of both sexes complete compulsory education,take part in non-formal education programs and live Bangkok Metropolitan

Expected Outcomes

1.Acquire information in future image of non-formal education provision for enhancing self-directed learning of people as a means to make a decision in establishing educational policies.

2.Personel concerned are able to show readiness to provide non-formal education for enhancing self-directed learning.

3.It is a means to establish Thai people in potentiality in order to live in a successful and happy manner.

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IMPLICATIONS OF GLOBAL EDUCATION ON TEACHER TRAINING METHODOLOGY AND PRACTICE

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Research Objective

Rapid globalization has created a world in which education is no longer based in a specific country and culture, and this has profound effects on the field of teacher education. The North American models for teacher training focus on producing teachers who will be effective in domestic public school classrooms. Once these teachers leave North America to accept international teaching positions the models prove to be inadequate. This workshop will first present the North American models and then investigate what substantive changes are necessitated by the demands of global education.

Methodology

Research methods in support of this paper include the following:

- o a review of the literature concerning North American teacher education models;

- o anecdotal and survey research with North American teachers who have had international teaching experience;

- o personal reflection on our own teacher education, teaching, and international experience.

From this methodology we have created a new analytical model to address the demands of an increasingly complex global educational field.

Scope of investigation

For the purposes of this conference we have limited our research and recommendations to models found within North America and also limited applications and modes of change to the Pacific Rim.

The North American Classroom

Education in North America has undergone many shifts and changes over the years. The schools in North America began in the early colonial days as mirror images of the schools in England and other European countries. Often the isolation of the school and the diverse population served defined the methodology rather than any conventional educational wisdom or philosophy. The *one room schoolhouse* became a kind of model; everyone thrown together without regard for age or learning needs. The teacher in this classroom was usually a parent without formal training. The availability of books was sparse; the bible often being the main text. The emphasis was placed on the *Three R's: reading, writing and arithmetic.*

As cities developed and the population became more centralized and dense, the need for a new kind of schooling became apparent. Those who wished to teach went to teacher colleges or so-called *model schools* to intensify their knowledge of core subjects and to begin to explore such notions as specialization, classroom management, teaching styles,

etc. Most areas in North America passed legislation making attendance at the Public School mandatory by law. The school began to occupy a multiplicity of roles in the rapidly modernized North American society. These roles were often incompatible. The American classroom became a kind of secular temple. It was to baby-sit a whole generation of young people while the parents worked. It was to educate huge numbers of people to make them functional citizens who could take jobs and understand the issues in a democratic society. It was to impart values and morals, although no one was quite certain just whose values and morals ought to be imparted. And it was to produce a generation of technological wizards who would allow the West to compete with the Soviet Union. Always in North American education there is the debate about what to teach and what to emphasize. We have a kind of *pedagogy de jour*. And today in Canada and in the United States it continues. Many school systems have come to resemble *education malls.* In this store the fundamentalist school, and over here the arts school, and there no school at all…the home school. It is a kind of philosophical smorgasbord.

Against this backdrop of competing interests and philosophies our teachers are trained. But for what? Teacher training standards in North America vary greatly from place to place, and yet there are many commonalities. No matter what the influence of psychology and sociology and technology and educational philosophy, there is a remarkable sameness to the way we educate our teachers and to the way we view them in our society. Teaching in North America is the *unprofession.* Teachers do not have the same professional status as lawyers, doctors, or architects. They are not paid at those levels and they do not garner that kind of respect. The typical teacher candidate in North

America satisfies the teacher training requirements en route to a bachelors degree or with additional courses and a practicum. Primary attention is paid to accumulating a certain level of knowledge within a core subject area. Very little attention is paid to learning styles and teaching modalities. Teachers are not, for example, trained to know which style might be best for which learner. They are not introduced to the notion that teaching is very much a performance art, and that *how you teach what you teach* is every bit as important as *what you teach*. They are given only the most rudimentary overview of the disciplines related to education; such as psychology, philosophy, sociology and intercultural studies. They are prepared for one kind of classroom, one kind of learner, and they have been trained to impart one kind of knowledge with one kind of methodology. The students will attend because they are expected to and because they have to by law. For the most part, the students accept their role, accept the stress of their situation, and strive to achieve what they can. The subject matter is prescribed by the state. The outcomes are formulated at another level. The classroom will be manageable and the students, the teachers, the parents, the administration will all conform to the roles they must play.

The problem with all of this is not that a North American education is somehow deeply flawed, or that North American students are short-changed in the public school system. Quite the contrary. For the most part, even given the dire warnings of inadequate schooling and the consequences for our society, we seem to produce students who are fairly well equipped to enter into our society successfully. The problem arises when we try to export this system to the rest of the world, to the global community.

North American Teachers Abroad

What are the assumptions that North American teachers take with them to schools all over the world? For the most part, assumptions about any environment are based upon cultural norms and training. Michael Polanye (1962) suggests that it is within the framework of human nature to define the situation. Often, according to Polanye, this definition is arrived at quite apart from what the situation actually presents. An individual brings to the environment a set of expectations that normally are derived from one or more of the following sources: empirical experience that resembles the new situation, preconceived bias or value clusters, so-called secondhand or hearsay information, information from informed sources and interceding training or education.

In the case of teachers, this methodology of defining the situation in a pedagogical setting is no different. If we examine Polanye's checklist of sources for arriving at a definition for the situation, we can immediately eliminate the final one: namely training or education. North American teachers are simply not given any cross-cultural awareness training or education. They are trained and educated to teach in a North American setting. Given that most teachers have no firsthand experience teaching in a global classroom, we can safely eliminate another credible source for accurately defining the situation. What is left is not promising. North American teachers will enter the global classroom armed with preconceived bias and values, secondhand information and perhaps a quick reading of the Lonely Planet Guide to that culture. They will define the situation based upon their own experience in school, which is North American. Their teacher training, which we have already discussed as consisting primarily of core subject

material, will prepare them for the structures, norms and expectations of a North American classroom, and at that this training in terms of learning and teaching styles is minimal.

Given all this, what does the North American teacher expect to find in the global classroom given their North American definition of the situation? The first assumption borders on the ridiculous, but needs to be said and examined. North American teachers are trained and schooled to teach people who speak English. This is obvious, but it goes deeper than what appears to be a ridiculously transparent statement. It goes to understanding and expectations, to style, to the structure of lessons, and finally into areas of how we make meaning and how we make sense of our world. Philosopher and linguist Noam Chomsky (1992) suggests that we know and understand what we know and understand based upon language, that language shapes thought and perception. He goes on to say that our way of making sense of our world is in the words we have and the syntactical structures in which we choose to arrange those words. So is it any wonder that our teachers think in English, understand in English, and assume at the most fundamental level that the rest of the world does as well. What are the implications of this? On one level, it means that a North American teacher parachuted into a global classroom is teaching individuals whom they know on a surface level don't speak or understand English, but nevertheless they impose a template over the classroom that assumes English understandings and structure. So it could be said that they are *teaching English to those whom they know don't understand English according to an English structure.* And we wonder why this is so unsuccessful. How could this be anything else?

Imagine if you will an ECE teacher in a daycare with pre-language babies giving instructions in English, designing learning objectives in English, structuring lesson plans in English, then being completely baffled and frustrated when the learners just don't seem to get it. While the parallel is not direct, international students are not babies; they have a separate and distinct culture, and if this is not understood or taken into consideration in designing lessons and the methodology to deliver them, the same frustrations and ultimately the same failures will occur.

North American teachers expect students to understand the rules of engagement. The teacher does what he or she does and the students do what they do. Everyone knows the rules. The students as well know the level of professional respect afforded teachers; they hear their parents deride teachers and they know the kind of pressure that can be brought to bear upon a teacher. The North American teacher thinks in linear progressive fashion. It is part of teacher training, and part of their own schooling. One thing after another. Each building block is put in place and will connect logically and sequentially to the next, and so on. This is not true in many cultures. Learning in some cultures is not linear, but inclusive and elliptical. North American teachers are trained to view knowledge discretely. There is a separation of subject areas; one does not mix disciplines. Again, this is not true in many societies. North American teachers are trained to view the empirical as separate from the spiritual. This notion is deeply embedded in the North American school system. This is not the case in many global cultures. North American teachers expect that when they ask questions of their students, they will get a quick response that is demonstrative. Again, not true in many societies. North American

teachers expect students to bring their own ideas to the classroom and to challenge and ask questions; this is encouraged in the new curriculum in North America. This is not the case in many global cultures. North American teachers expect students to work together in groups and teams to solve problems. In many cultures this kind of group learning experience is unknown and frowned upon. North American teachers expect a good deal of support from administration. The global teacher is often unsupported and *on their own.* North American teachers expect a curriculum, complete with lesson plans and defined objectives and pre-written examinations. Often this is not the case in the global classroom. The North American classroom teacher has a set of expectations regarding the family of a student and the role they ought to play, as well as the nature of the school and education itself within the society. In essence, the North American teacher is barely prepared to cope with the demands of the North American classroom, let alone understand and adapt to the necessities of the global classroom.

What then happens when these teachers enter classrooms overseas? In the vast majority of cases, the transition is not an easy one, and the teacher is not effective for quite some time. In some cases, this transition is never successfully completed and the teacher goes back to North America before ever becoming useful in their assigned position. The reasons for this are threefold.

First, the teachers carry with them the assumptions outlined above. These views of teaching and learning may work against them and get in the way of determining what is required in their current assignments. North American teachers are not trained to analyze

the educational setting or to adapt themselves and their teaching styles and methodologies within it. Rather than looking for the information and cues within the new teaching environment to lead them to a determination of what is appropriate and useful, in most cases these teachers simply impose their ways of thinking and teaching upon whoever happens to be in their classroom.

Second, many educational institutions and other organizations are not clear about their own goals for the English classes they offer. There are tens of thousands of language schools all over the world that are run as any other business enterprise, and attempt to offer English classes to please all backgrounds and tastes. Course offerings may change quickly to suit market factors, and therefore the teachers they hire are expected to be able to teach a wide variety of English classes. It is a rare to see these schools have clear direction for their programs and hire teachers trained appropriately to fit into the established framework. Teachers trained in North America to be effective with elementary school students then scheduled into Business English classes for professionals would have enough of a challenge remaining here, never-mind the cultural issues involved in teaching internationally. Therefore, the teachers must spend much of their limited time and energy in understanding their situation and role, while students may also be unclear. Many language school classrooms contain students who are not exactly sure why they are there, but do know that they would like to learn some English. Universities often do not attempt to help students enrolled in degree programs in English clarify why they are studying the language, what uses it might have in their futures, and what programs of study would be most effective in reaching the students' goals.

Third, the cultural issues intertwined with living and working in a foreign culture ensure that the teachers are not focusing only on classroom issues. As mentioned above, teachers in North America are not afforded the status and respect that is given to teachers in many other cultures around the world. This alone may leave a teacher unclear as to his or her role in the new culture, and faced with expectations that he or she had not imagined. As teachers go through the expected stages of culture shock and integration they must face a variety of personal crises, often without assistance or even recognition from their colleagues. Learning the ins and outs of daily life in a foreign culture may be difficult enough to handle for a great number of people; add to that the pressure of a teaching position that is somewhat ambiguous and the situation may become untenable in some cases. Feelings of isolation, resentment, and loss are common among teachers first living in a foreign country, but most educational institutions do not take this into consideration in any way.

The training and assumptions that the North American teachers carry with them to international assignments are therefore, in the majority of cases, not appropriate or effective in the foreign culture. Although the teachers may have the best of intentions concerning their new students and educational goals, without recognition, analysis and discussion of the teachers' own assumptions, beliefs, and experiences there will be little chance for success. It is indeed ironic that it may be the case that the more traditional North American training a teacher receives, the less prepared and adaptable they will be for the global classroom. This of course flies in the face of what we all want to believe.

Many of the difficulties and disappointments we have seen in the last decade in the exportation of English to the world classroom are the direct result of our system and our society. The answer to this complex dilemma is not to eliminate training; it is not to place advertisements in newspapers to attract anyone who is a native English speaker, without regard to qualifications or experience. The solution lies in a rigorous examination and study of underlying pedagogical assumptions and the creation of a new pedagogy for the new millennium of global learning.

Looking to the Future

This raises a number of questions. How do we correct the issues inherent in the situation described above? What methodologies or systems will provide the world with English speaking teachers that are effective not only in North America, but in any country that wishes to promote the teaching of English? Would hiring native English speakers who have not trained as teachers in North America be more effective in some cases? Are non-native speakers of English who are therefore culturally competent more successful at teaching students from their own culture? What are the most effective methodologies for language teaching and language teacher training? What role does culture play in the spread of English as an international language? Although the field of language education has come a long way in recent years, much more research and inquiry must be done before we will be able to answer these questions with certainty. However, some recommendations can be put forward.

One of the many ways in which the North American teacher training system can begin to address some of these concerns is to include a focus on intercultural theory and practice. In North American schools, teachers are faced daily with classes of students from many different ethnic backgrounds. Yet little is done to help these teachers understand the beliefs, customs, and cultures of these groups. Students from minority groups, which often comprise a large percentage of the total student populations, are expected to assimilate into North American culture of their own accord without any direct assistance or discussion. They are driven by law to enter the school system, yet many new arrivals may be facing a task that is far beyond their capabilities, not only for reasons of language. Intercultural issues included within the mandate and curricula of the school would help promote understanding among students and teachers and the educational system while allowing teachers to effect greater change within the classroom. It would also allow teachers who are training for positions overseas an opportunity to shift their perspective. Rather than assisting this system to promote only one "correct" way of teaching, learning and thinking, educators should be taught to recognize other world views and to understand the benefits and difficulties involved in intercultural communication.

A pioneering program that attempts to tackle some of these concerns is run by the International Teacher Education Centre (ITEC). *Cultural Awareness* courses are part of the core curriculum for all teachers being sent on international assignments. Within this program, teachers are not only trained in the specific teaching skills and methodologies needed for a variety of educational settings overseas (TESL), but they are also assisted in

looking closely at issues relating to their own beliefs about their culture, themselves, and the world. Teachers participate in experiential activities and discussions that allow communication around topics mentioned above, but not addressed in either the North American public school system or other teacher training programs. Teachers within this program become part of a virtual support network of educators and students from around the globe, joining teachers who have been previously trained through ITEC and are currently teaching abroad as well as the students in their classes who are learning English and interested in North American culture. In this way a wealth of information can be shared in all directions, as teachers here prepare for their time overseas and teachers overseas are supported by each other and the trainees and instructors in North America. In this way, rather than entering a new culture with inflexible ideas and expectations about how they will fit into the educational system and then experiencing a turbulent integration period, these teachers are assisted in recognizing the cultural assumptions deep within themselves and can choose to examine and alter these assumptions as necessary. Teachers are trained in evaluating all aspects of the requirements of a new teaching position rather than simply assuming that all educational institutions are similar in kind to the North American classroom.

Neil Postman (1996) has suggested that it is time for a new curriculum in a new kind of classroom. The models that served the industrial revolution, increased literacy and prepared a post-war generation for the technological revolution of the 1960's are no longer functional. He argues that if a computer terminal and the appropriate software can supply the new student with all the information he or she needs, what then is the function

of the classroom teacher?   These questions, this kind of deep inquiry, cannot only be asked in North America if we are truly moving toward a global classroom.   Perhaps it is time for educators around the world, at conferences such as this one, to reflect on the goals of education, to differentiate education from training or instruction, to forge a new model that better reflects the challenges of a global education system.

While many aspects of North American teacher training ideology and practice must be improved, this is not the only place where changes can be made.   International institutions should also be asked to take more responsibility for their educational programs and goals.   Rather than hiring teachers who are expected to bring all the answers with them, strong leadership is needed at each school to promote program cohesion and the effectiveness of courses offered.   One suggestion is to use intercultural teams of highly skilled educators both to orient and re-train new staff members and to set the institutions' educational goals for the future.   Offering more support to both students and foreign teachers outside the classroom is a directive that is long overdue.

The questions raised by the notion of a global classroom are deep and profound, and in some cases disturbing.   And yet these questions are not that different in kind from the ones raised everyday in a school serving some local population somewhere in North America, or the world for that matter. In that microcosm the debate is similar.   What is the role of technology in the new classroom? How do we motivate students to become independent resourceful learners? How can we better train our teachers so that they are more knowledgeable, adaptable and professional? How can we establish objectives and

goals that better reflect the needs of our society? How can we cope with the demands of multiculturalism? Every school in every county or state or region in the world is a microcosm of the larger and more pressing questions that confront and confound educators in the new millennium. The need, therefore, is to ask the questions in open discussion and to be willing to effect change in the way we do the business of education. It is a profound task and there is none more important.

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POLICY NORM IN STUDENT'S FUND MANAGEMENT, FACULTY OF EDUCATION IN 2000

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Abstract

Student's Fund is the fund from the budget of Chiang Mai University and from the donation of the regional communities. The student's fund will provide for the students who had the problem of poverty but had a good study. Faculty of Education also get the budget as the same ways since established had been provided to the students under the faculty.

This study was a basic Research and Development type conducted under objectives of : Policy, administration, the problems and norms of the development in Student's Fund Management. The questionnaire and in-depth interview was applied to collect and analyze data from 88 students and 8 staffs. The results were the policy not clear, the administrative in student's fund in the field of proclaim low satisfied and the fund not enough for the needed and had late in paying. The problems of student's fund were the provided of student's fund not clear, also no specific follow up and evaluated. The norms of the development in student's fund were should be free in establish their own policy for student's fund management, and must be increase the funds for develop the teacher career.

Introduction

Student's Fund is very importance for poor students to subsidies their study in the university. Facultly of Education Chiang Mai University had been many poor students to apply for student's fund to support their study.

Faculty of Education must been the policy for the proper management in student's fund in the sufficient for students. Nowadays faculty of education was produced teachers in 14 majors. There are about 1,369 students, mostly the students came from regional and rural families which had low and middle income.   The   economic problem from the families of students is the serious problem for the develop and quality of education in faculty of education, because when the students ability entrance in university but no ability to pay school fees and expenses in yearly.

In the year 1999 faculty of education had been 97 students to apply for student's fund but faculty can supply only 74 funds.

Student activity affairs was responsible in student's fund in the faculty of education. In the year of 2000 its can provide total 79 student's funds   5,000 Baht for each, Moreover, to be manage the student's fund in the absolutely and proper under the policy of Chiang Mai University. The researchers was the committee of the student's fund management in the student activity affairs interested to study the administration in policy norm in student's fund management, Faculty of Education in 2000.

Purposes of the Study

The purposes of the study are:

1. To study Policy Norm in Student's Fund Management.

2. To Study Administration of Student's Fund Management

3. To Study the Problems of Student's Fund Management.

4. To study Norms of the development in Student's Fund Management.

Expectation and Limitations

Policy and norm in student's fund management, only faculty of education in Chiang Mai University.

Research Design and Methodology

Population

The population of this study will be consisted of 88 students who asked for the student's fund, faculty of education, Chiang Mai University,

8 staffs who related to student's fund management

Instruments:

1. Documentation was used to gather information, policies and figures from main office of student affair Chiang Mai University.

2. Questionnaire for the students.

3. In-depth interview and focus group were used for staffs.

Data Gathering

The research was carried out by the joint co-operation of students, teacher staffs and researchers. The research procedures are discussed below:

1. Study the document related to policy and figures in student's fund management.

2. Divide the population into three groups.

3. Trained the student staffs helped administered the questionnaires.

4. Almost twenty percent of the questionnaires were also sent by mail.

5. Survey and in-depth interview and focus group for teacher staffs of student's fund management.

6. Team researchers made advanced reservation for in-depth interview and focus group discussion.

7. Try out the questionnaire.

8. Collected the data from population which divide be three groups, of three meetings.

Data Analysis:

Eighty eight questionnaires from fourteen majors were analyzed with SPSS for Windows with statistics used to study were percentage, standard deviation. While the information gained from eight teacher staffs in-depth interview, and focus group discussion were synthesized.

Conclusions

The conclusion of the research were as follows:

1. Policy Norm in Student's Fund Management, Faculty of Education in 2000 Chiang Mai University.

The respondents revealed that the policy were not clear. The state of fund management not clear in performance, the provide of student's fund not clear and the result of the interview committee not clear too. Then fund were not enough for the needed of respondents. Each amount of fund was unedequate for needed of respondents and timetable was not proper. But the respondents revealed that the fund were very useful for them and their family.

2. The administration of Student's Fund Management, faculty of Education in 2000 Chiang Mai University.

The respondents revealed that the administrative high satisfied in the field of the useful of the grant of the student's fund can released the suffering of parents. And low satisfied was the time declare was not proper its too short, and the fund not enough for the needed of the students and had the late in paying.

3. The Problems of Student's Fund Management, Faculty of Education in 2000 Chiang Mai University

The respondents revealed that it were problem in time, the declare, the interview, the provided of student's fund not clear, the follow up and the evaluation of student's fund management also the co-operation not clear.

4. Norms of the development in Student's Fund Management, Faculty of education in 2000 Chiang Mai University.

The respondents suggest that the faculty of education should be free in establish the policy in the student's fund management. And should be set the team committee in special activity in the policy fund management. The policy of finding resources of funds

must be varying. And must be increase the funds for developed the teacher's career, and must be following the performance of the student's who got the fund. And must be evaluation and assessment the student's fund. The respondents had been revealed the point of policy in interview the student's fund that must be set the interview committee from the varying departments of the education faculty, and all of the students must be have the same opportunity to apply the student's fund. The time for interview of the committee must be equal.

Recommendations

1. Faculty of Education should have norm of student's fund management clearly and more cooperative and inform to each related parts.

2. Faculty of Education should have norm for administration in the field of :-

   2.1 Should be set the order (regulation) for specific committee to run the student's fund in faculty of education.

   2.2 Should be set the task for student's fund management.

   2.3 The final decision to the students for the student's fund should come from the committee.

   2.4 Should be openly proclaim the student's fund and inform those who's related such as student who's granted the fund, their advisors and committee.

   2.5 The tribute and distribution for student's fund should invite their advisors and the committee of student's fund.

3. Faculty of Education should have the administrative in student's fund involve

   the needed of students and should have the policy of

   follow up the students who's granted the student's fund closely

   each semester.

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SMART SCHOOL ENGLISH LANGUAGE TEACHERS' THINKING: A METAMORPHOSIS

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This qualitative study explores a teacher's concerns and interests in teaching English Language. It focuses on the influence of Smart School pedagogy in classroom teaching and learning. The term, Smart School pedagogy refers to the generic skills that formed the backbone to effective teaching methodology in Smart School's setting in Malaysia to come. The aim of this thesis is to go beyond seeking views from the course participants through quantitative measures. This case study was conducted on one secondary teacher in Seberang Perai, Penang, in July/August, 2001 who attended the Smart School Teacher Training programme in 1999. The data gathered consisted of transcribed interviews, classroom teaching observation field notes and recording (both were videotaped) and reflective essay. My findings suggest that the teacher under study felt success with the pedagogy under two conditions, that is, when she had the intention to use it and when her pupils' level of proficiency warrant it. Four main themes emerged from the data analysed, they are namely; teacher's intention, transfer of Smart School pedagogy, teacher's teaching method and relationship between students' knowledge of English and teacher pedagogy. Teacher thinking revealed in this study points to commitment of the teacher to use Smart School pedagogy to create effective teaching, satisfaction in teaching and retention of learning These have a number of implications relevant to the content and process of Smart School Teacher Training programme especially in relation to English Language pedagogy. It is based on the argument that

teachers do not merely respond to the intentions of the programme structure but are skilful analysts of contexts and able to negotiate Smart School teaching and learning to fit their classroom demand.

" Teacher pedagogical content beliefs are closely related to their actual classroom behaviors, both at the lementary and secondary levels. That is, what a teacher believes accurately reflects how he or she really teaches.

(Grossman et. al., 1989)

Introduction

1. Outline of the study

This study describes the process of learning to teach English Language using Smart School's Pedagogy by a trained teacher (Adriana), which I carried as a preliminary study of my Post Graduate study with UPSI. The study was not about the content or structure of Smart School Teacher Training Program, nor was it about what the teacher (I conducted a case study on one secondary teacher in one of the school in Seberang Perai, Penang) should know or how she should perform while teaching. It was not meant to evaluate the teacher's practice according to a set of predetermined criteria of Smart School Teaching-Learning, nor was it an assessment of the knowledge she had about teaching and learning English Language using Smart School's Pedagogy. Rather, it grew out of a concern to uncover some of the issues that characterize the process of learning to teach English Language using Smart School pedagogy from the teacher's perspective, and more significantly to three main questions arising out of the data analyzed. They are namely, the intent/purpose of the teacher: Does the teacher intend or aim to use that

knowledge of Smart School pedagogy in their language classroom teaching? Teacher's theories and belief: Does the teacher know more about her teaching than we might imagine? And, thirdly, the teacher's action: Is the teacher inhibited from being maximally effective by the social nature of the pupils? The study also aimed to explore to what degree case study research techniques can be used as a tool to assess the teacher's Smart School's pedagogical knowledge and thinking.

The study focused on how one Smart School's trained teacher developed her professional knowledge about Smart School's English Language Teaching namely, her intent/aim, theories and belief, and teacher's action in the classroom. The study aimed to address one of the areas which has not received much attention in in-service Smart School's English Language Teacher Training Program research that is, what are the concerns of the teachers trained under the program with reference to teacher's thinking, rather than to an external framework. So the research objectives were embedded within the general theoretical frameworks of teachers' thinking. Studies like this one emphasize what teachers are, rather than what they do. Teachers appear to have developed quite an extensive body of professionally relevant knowledge that appears to be based upon the 'personal' and 'commonsense' knowledge, teachers' role in translating an innovation into a workable system for the teacher's own classroom, the teachers' practices based on influence of context in which they work and the tasks they have to accomplish resulting in a less than intellectual challenging curriculum, and innovative ideas are interpreted and reinterpreted by teachers over a period of time and translated into practice laced with several biases and interests. Learning to teach is an active process involving interaction between thought and action (Calderhead 1987). Lim (1997), Hannah Pillay (1995) and

Chow (1999) provide this link to the local Malaysian context. Their findings reveal that teachers' criteria of teaching are embedded in the notion of preparing pupils for examination sake and completing the syllabus is one of their main preoccupations. This is supported by their teaching methods which are skill-based, similar to the behaviorist view of learning. If this is so, our teachers, however effective they are, are most unlikely to be as good as they possibly could be at teaching, at playing their role most productively using Smart School pedagogy in the classroom. So, it seems only reasonable, if this is the case to suggest that we should at least try to help them by inducting them into productive teaching strategies. Three questions arise immediately, however. Firstly, do we actually know what language teaching learning strategies are typically productive in Smart School's Pedagogy? Secondly, do we have reason to believe that the pedagogy will be productive for the particular teachers we are trying to induct? And, thirdly, do we know how to induct them? All three are serious questions that need further investigation which will deal with in the recommendation section of this study. These questions bring forth two points of importance. First, this knowledge is based on different personal learning experiences, is rich, diverse and complex, and probably different from the prescriptive mode of knowledge with which they are presented during the Smart School teacher training program. Second, teachers' professional courses do not seem to make much difference due to the teachers' inhibitions.

The aim of this study is to go beyond seeking prescribed views on Smart School pedagogy and to look at some implications of teachers' views on pedagogical reform. In this way, we might learn about the pedagogical values held by these teachers that may be

able to inform practical and reliable indicators for Smart School pedagogy implementation. Thus, I hope to generate several criteria for teacher thinking in Smart School pedagogical knowledge. Although these criteria are not exhaustive, they will provide an analytical framework for teacher thinking about Smart School pedagogy implementation in the classroom. The primary aim for this study is to understand teacher thinking construct in that it hopes to provide link for teachers as an implementer group to express their views on Smart School pedagogy.

This study is based on the argument that teachers respond to their own intentions to negotiate teaching and learning in the classroom. They are also skilful manipulators of contexts. The data will show that teachers negotiate and devise strategies when faced with teaching and learning experiences which are not relevant to their classroom conditions. The perception of Smart School trained teachers toward the Smart School pedagogy remains private to them and never is understood unless we seek their views. I am therefore proposing an alternative approach to research on the implementation of pedagogy. This is because teachers' classroom experience is not only dictated by the prescribed pedagogical guidelines but also by influences of schools and learners. Due to the complexity of teachers' intentions, researchers cannot neglect teachers' views. We will see how these views on pedagogy can inform understandings to generate criteria for pedagogical exploratory studies of teacher thinking.

' Teaching is not something one learns to do, once and for all, and then practices, problem-free, for a lifetime, anymore than one knows how to have friends, and follows a static set of directions called "friendship"

through each encounter.   Teaching depends on growth and development,
and it is practised in dynamic situations that are never twice the same.'

Ayers (1993: 127)

Research Methodology

The full period of data collection covered 3 weeks – during Teacher Education
Division's Research Course Fieldwork. The method of data collection included a blend
of qualitative techniques: open-ended interview, classroom observation and reflective
essay.   The qualitative data gathered by these different complementary methods were
designed to capture the teacher's knowledge at two levels, theoretical and classroom
activity. At the theoretical level, they aimed to elicit teacher's ideas about language
learning, teaching and Smart School's elements through interview and reflective essay
analysis. At a classroom level, they focused on the activities and learning experiences
carried out by the teacher in a lesson observed by researcher and how these were used
within the teaching-learning process (Richards 1990), together with the "definitions and
process by which they are manufactured"''(Bogdan and Biklen 1982:33). That is the
"qualitative nature of teacher's thought and actions '' Butt and Raymond 1987:71).

The data gathered consisted of transcribed interviews, classroom teaching
observation field notes and recording (both were videotaped) and reflective essay. Data
analysis consisted of, first coding the teacher's data both deductively by using the general
categories derived from the literature and research questions, and inductively by
identifying the concepts that formed these categories as they emerged from the data. The

data do not fit categories neatly because human consciousness is far from neat and has many implicit and ill-defined connections. Modifications and expansions of original categories took place throughout the analytical process until the material was arranged in a meaningful way.

A second analytical stage was an inductive process of defining, and redefining the initial broad based categories, after new readings of the data. As I was reading, I was jotting down the ideas and concepts that seemed to be embedded in the data. These made up the context of each of the categories, for example, ' language learning', 'smart school's elements', etc

Third, I revised and modified the a priori themes i.e. the five research questions that had formed my guide in the interview, observation and reflection essay (refer research questions on page). Following the traditional "cut-and-paste" techniques, I gathered all the chunks of data belonging to the same category. This was completed by written summaries of each different category (Hewson and Hewson 1989). This served as a way to validate the categories and themes, which emerged from the data.

Four main themes were finally clearly identified (Teacher's intention, transfer of Smart School pedagogy, Teacher's teaching method and relationship between students' knowledge and teacher pedagogy); by means of which I described the teacher's thinking and actions, and how it developed in teaching. These became the organizing themes of this case study. The analysis was completed by writing up the teacher profiles in a case study format, which described the pertinent points of the teacher.

2.   Case study method

Case study research transfers some control of the research process to the researched. With this brief opening statement about case study, we will now explore how case study as a research or evaluation method emerged and why such a method has been formulated. The account by the teacher practicing solely in his/her classroom might not share the same intentions of the trainer as well as that of programme developers. So case study was a rational proposition due its holistic ability to portray the complexities of participants' actions and contexts within a classroom. Furthermore, according to Louis Smith (1974, p.7), case studies offers a quality of undeniability, it shows someone is doing something. Secondly, the case studies are totalities i.e. 'holistic' and 'systematic'. Thirdly, a cluster of element seems summarisable as a particularistic quality i.e. vivid, concrete and detail. Fourthly, it can be individualized as in this study and, finally, the feature of accent process, changeover time i.e. data are revealed on where and how one begin, implement and terminate. In addition, case study is close to the real world of the administrator. So, case study I a viable method to be employed in this qualitative research.

3.   Why and how have I used case study?

And as my study is self financed and locked in limited time limit (12 weeks), case study seems to be the most appropriate means to study as it offered a better understanding and empathy to participants of a innovative programme through its detailed, impartial, accurate and authentic reporting. In order to gain an understanding of teachers' experience of Smart School Pedagogy, rather than exploring how pupils adapt to this pedagogy. This study is concerned with how Smart School trained teacher slots the Smart

School pedagogical element into the classroom. To achieve such an aim, I have to search for a suitable research method and believe that case study as a research method has the qualities to satisfy my intentions. As previously stated, I intend to explore Smart School trained teachers' thinking without imposing any prescribed criteria. Therefore, it was necessary for me to adopt a research method that is able to capture its rich environment and culture. Case study is suitable because it "*...is rooted in the practicalities and politics of real life situations*"(Adelman, et al., 1980:56).The diversity of views and experiences that are idiosyncratic of this study would most probably be lost if it is undertaken in other research methods. On the other hand, case study "*recognise(s) the complexity and 'embeddedness' of social truths*" (p.59) because it deals with social situations and is able to represent the idiosyncrasies, discrepancies or contradictions of the participants' viewpoints. The five features mentioned above fit well in my study. First of all, it is about a teacher and her on-going business of teaching. The data gathered from the interview, observation and the reflective essay represent the realties of her thinking and actions. These can be easily summarized into themes, concepts and categories. Case study enables me to individualise my report pertaining to the respondent. Finally, at the present stage of Smart School implementation in Malaysia, it can be used to answer the question about the implementation process. Hence by using case study method, the complex real life situation of these pupils can be understood in the context of the case.

CONCLUSION

4.   Summary and conclusion

The teacher's thinking in this study have become central to understanding the process of learning to teach Smart School Pedagogy in a normal secondary school setting. If given the chance, not only they will reflect on their practicum of teaching but also on their experimentation with the Smart School Pedagogy which they carried out after the programme.   These reflections provide them with a springboard to explore their theoretical aspects of Smart School conceptual blueprint in the Smart School Teacher Training Programme, without necessarily having to postpone or reject the idea until they are provided with all aspects of support to implement Smart School Pedagogy. This is contrary to the conception that these teachers (those who had undergone training in Smart School Pedagogy) abandoned totally what they had learnt during the 14-week course.

Although the teacher in this study had implemented some of the Smart School Pedagogy befitting their present practice during the conducted study period of this study, yet the degree of acceptance is subject to a great deal of variation. There is much evidence that the pedagogical and content knowledge introduced to the teachers during the Smart School Teacher Training Programme have little influence on the subsequent actions (Zeichner et. Al. 1987). Researchers have found different explanation for the fact that teachers find in-service teacher programme, either relevant or difficult to grapple with. For example, experience teachers may base their teaching goals and the way they teach on their classroom teaching experiences prior to attending any in-service courses. The practical experience in classroom is the source of teachers' knowledge, therefore there is little impact that in-service teacher training programme have on how teachers think about

their work. How they think have been shaped by years of classroom teaching knowledge?

The picture, which emerged in this study, is more complex since during Smart School Teacher Training Programme's practicum, they have drew on largely their teaching knowledge experience. My data suggested that first; a large proportion of the transformation of teacher's intent had its origin during the Smart School Teacher Training Programme duration. These flimsy changes in role, aspect, element and criteria were related to the way they selected the various generic skills, provide platform for implementing and organized activities to suit the elements of Smart School pedagogy. Supporting evidences showed that it was Smart School Teacher Training Programme, which induced this particular behavioral transformation, could be found in the fact that the teacher in this study develops her pedagogical knowledge for practice to make the subject matter accessible to pupils. Thus, Smart School Teacher Training Programme played a very important role in shaping the teacher's classroom teaching. It was the knowledge (elements of Smart School) learned during the Smart School Teacher Training Programme which becomes apparent in her practice. Second, although the method acquired 3 years ago during her Smart School Teacher Training Programme which still contributed to the learning activities in the classroom and the selection of content. Smart School Teacher Training Programme knowledge formed the basis for the discussions on the way she taught in this study. More specifically referring to :

1.	Teacher intent to use Smart School pedagogy in the classroom

2.	Transfer of Smart School pedagogy elements in the classroom

3.	Teacher's teaching method

4. Relationship between students' knowledge of English and Teacher
   Pedagogy

In summary, it is unrealistic to conceive of Smart School 'teacher training programme education as imparting a set of pre formulated ideas or principles to be implemented by teachers' (Calderhead 1987). The furthest point is just to the extent of playing an influential role in shaping the teacher's performance in the classroom in his or her own ways. It was the knowledge learned during the programme which will firmly become apparent in her classroom practice if given time and support. Second, although the elements newly acquired during the programme contributed to the learning activities and selection of content, previous knowledge of teaching formed the basis for the discussion of the way they taught. More specifically:

1. The teacher implemented a view of language teaching which was different from the present conception. Basically, she shifted from the notion of using only English when teaching the language to using L1 sparingly which is functional in approach. A concern of grammar still prevails in a structural approach to language.

2. There seemed to be a common shift from an active teaching to a more passive behaviorist-oriented position.

3. The teacher intends to implement Smart School pedagogy in the classroom; this is a positive behavior, which she will embrace fully once she becomes committed.

Some of the ideas mentioned by the teacher during the interview and in the reflective essay support this.

4.   The teacher internalizes the teaching method learned during the programme and reacted to it in different ways. While she found some ideas from the programme to be viable, she still maintains the method she is used to in light of administrative demand and learners' level of proficiency. The method was however, laced with little modification on their part, despite misgivings about it.

5.   She left the programme with different kinds of knowledge about the dynamics of teaching and learning English Language. To a considerable extent these were deeply rooted in her previous teaching knowledge prior to attending the programme.

IMPLICATION

Implication for Smart School teacher training

5.   Content of Smart School teacher training

This analysis has shown the presence of a number recurrent themes in the teacher's knowledge before they attended the Smart School Teacher Training programme. These have a number of implications relevant to the content of English Language pedagogy under Smart School Teacher Training programme .

First, rather than present the teachers with a given curriculum, based on the transmission model, starting with, and building on these themes would contribute to a more active participation of teachers in a shared curriculum and lead to a more effective learning. It would also alleviate the endemic problem of lack of time in in-service

education courses, continuously voiced by teacher trainers, by which we justify transmission model.

The themes which were of general concern to researcher in this study were: teacher's intent to use Smart School pedagogy in the classroom, which include the teacher role and aspect of teaching; transfer of Smart School pedagogy elements in the classroom, that involves the elements and aspects of Smart School pedagogy criteria, aspects and elements of Smart School pedagogy; teacher's teaching method draws on the current and professional knowledge of teaching that incorporate the choice of criteria and aspects of teaching, and finally the relationship between teacher's knowledge of English and Pedagogy which incorporates the concept or theory of language learning and a discussion about language teaching. These categories cover a lot what happens in the classroom and are the focus of current research.

Second, if teacher educators have an understanding of in-service teachers knowledge, it may help to design in-service teacher education programme strategies and to specify the content of teacher education in ways which can develop the existing knowledge more effectively. So, it can be argued that in-service education is not just what happens after the teachers enter the training colleges but also the existing teaching theories and belief. Helping teaches to be aware of the understanding they bring to continuing education is only the first step in the transition to Smart School pedagogical thinking, in which teachers learn to look beyond the familiar and secured worlds of teaching and learning.

6.   Process of Smart School teacher training

First, it seems that, regardless of whether teacher training colleges are progressive in the content they convey, in-service teacher education should not be a question of imposing Smart School pedagogy on teachers.   It should be about establishing connections with the teachers' personal understanding and building on their knowledge. If we accept that the teachers' personal contribution has an influential role in learning new material, in-service teacher courses should aim to provide space and means by which teachers can bring up and examine their personal knowledge of teaching in order to see how it relates to teacher education knowledge, so that learning is more meaningful. Teacher educators need to know their in-service teachers' conception of teaching to make new conceptions of teaching intelligible or create, if necessary, dissatisfaction, with existing conceptions which may conflict with those taught. Though we have a subject on managing change in the Smart School programme, the focus, however, is too wide. The teachers are expected to change their worldview overnight, which I feel quite unreasonable, instead I suggest that the subject be narrowed down to classroom aspect of change only.

Second, we have seen that the teacher modifies her previous knowledge in teaching and learning after attending the programme. She teaches in the way which does not bear much resemblance to her previous knowledge and practice, although this does not mean that this knowledge does not influence the way she think about her activity. What remains an open question is whether this particular transformation is the only one possible, or whether different transformation should be made available to teachers, and whether this particular pedagogical knowledge is the only one desirable or whether this

induced the change into teaching method is the best way to promote teachers' ongoing development in the very varied and rich contexts in which they work.

Third, since it is clear that teaching performance and competence are not the same, evaluating teachers' observable behavior may not provide enough information about the way they have or have not internalised the new knowledge presented to them during in-service teacher programmes.

Fourth, the use of interview, together with observational record has proven to be invaluable in exploring teachers' knowledge, particularly by providing evidence that teaching is more than observable behavior.

Consequently, in-service teacher programme, should include techniques to evaluate teaching practice, which can reveal the assumptions, and beliefs which lie behind teachers' actions. Strategies that get teachers to talk about their work in different kinds of recorded interviews and recorded observations of their work can provide materials so that teaching can be individually and collectively analysed.

Moreover, the use of transcripts can provide a fruitful stimulus for discussions, in that 'examples of teaching by students may be at least as valuable as those showing experienced teachers because of the turn which events can take under less experienced guidance' (Westgate 1988: 149).

The videotaping techniques can be valuable means of allowing teachers to develop an understanding of their thinking and the ability to verbalize and think through what they are doing (woods 1990), thus enhancing their responsibility for and understanding of their classroom decision making. Recordings offer the possibility of

making explicit the possible divergent assumption about procedures and process held by teachers, tutor and teacher trainer.

Finally, most teachers will agree that pupils' learning rarely matches the curricular aims. Similarly, most in-service education programme should accept that teachers' learning is unlikely to be synonymous with curricular aims. It seems necessary that teachers' conceptions and understanding of their subject matter, teaching and learning should provide a foundation for in-service teachers education. Serious considerations of teacher's pedagogical knowledge will also encourage us – teacher educators' t- to examine our implicit theories. This will lead us to explore whether our programmes are consistent with our underlying assumptions (Weinstein 1989).

In the end note, understanding such as these 'can enable us to examine critically our current teacher education practices and to build teacher education courses which equip teachers not only with basic common competence but with the knowledge, skills, and confidence to continue learning' (Calderhead 1988: 63).

PROCEEDINGS   THEME 1   THEME 2   THEME 3   THEME 4

A VOICE MODEL FOR ENGLISH LANGUAGE TEACHING IN MALAYSIA/THAILAND

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Abstract

Knowledge workers of the Information and Communication Age would not be able to participate effectively in global and local production of knowledge if they do not master the English Language. The agenda on English Language is an interesting and controversial one for both Malaysia and Thailand.

The major focus, in this presentation, falls on teachers and their role in the teaching of English. It is argued here that the teachers' attitudes have a notable influence on their professional practices. Teachers have a measure of autonomy over what they teach, what image they seek to portray in their classes, what material and resources they use and how these are handled. The choices they make – or not make will have different implications for working towards better proficiency in English. More than often, it is assumed that teachers have very little to contribute to decisions and action plans with regard to curriculum matters. Scant attention is given to the voices of teachers. As such, little is known about the teachers' belief systems towards English and the teaching of the language, how they accept, negotiate and resist English language issues and initiatives.

This paper reports the findings of a study conducted among 200 language teachers (using structured questionnaire and oral interviews) on their beliefs, attitudes, teaching

and learning behaviours. As an action strategy, this proposes a model – Voice model that enables those in the teaching profession to give legitimacy to their opinions and ideas as well as empower themselves in a meaningful way.

Introduction

The teaching profession in the new millennium has taken a more challenging task. In order to breed students that are knowledgeable and informed, teachers require more than the traditional teaching method. How they impart values to students and the motivation that they themselves portray in the classroom is also important to create a holistic generation. There are many contributing factors in student education and development. Governments are constantly reviewing policies and legislation of education to create better learning environments. Parents also stake a major share in student education. Research shows that parents' involvement will create a positive impact and is proven through academic records and achievements. We know that teachers are also one of the contributing factors in student development and education. One cannot deny the influence a teacher has in moulding the minds of our children. Besides formal education, the teacher plays a critical role in influencing the perception of students towards learning experiences in their lives.

Despite the professional and formal training that they receive, in varied and unique classroom situations teachers would often need to make decisions based on their professional discretion. Such discretion does not merely surface with a year or two of

formal training but would depend on the years of experience. For instance when faced with the challenge of teaching a classroom of students from different backgrounds and ability levels the teachers instinctive knowledge about content and students would be a determining factor in the effective selection and presentation of text and materials. Assessment of students' progress would also depend on the teachers' knowledge of the subject matter and their commitment to teaching their students. The decisions made and the skills with which they are executed are often a complex interplay between the teachers' practical knowledge, pedagogical knowledge, professional considerations and knowledge about curriculum as well as syllabus specifications. Collectively these may be termed as their declarative knowledge. Nevertheless many teachers fail to deliver in the classroom when there is an abject gap between their declarative knowledge and procedural knowledge.

An important determining factor often over looked is the teachers reliance on their own personal experience as a student. Instinctive decisions and thoughts made in reaction to a classroom situation 'may hark back to a situation in which she herself was a student' (Kothagen & Lagerwerf, 1996). This instinctive reaction known as 'situated knowledge' (Kothagen & Lagerwerf, 1996) is derived from the teachers' own learning experience as a student. The experiences as a learner have far reaching consequences for a teacher. Despite their formal training teachers often fall back on what is perceived as the natural and effective way of learning. In other words they believe that what had worked for them would work for their students.

Focusing on teachers

In many instances, teachers have very little autonomy to make decisions and actions with regard to curriculum matters (Singh, Kell & Pandian). Scant attention is given to the voices of teachers. Maybe the conceptions that teachers are merely pawns in the education system have created this norm in society. Hence little is known about the teachers' belief systems towards the teaching profession, education policies and the curricular.

Introducing the Voice Model

In order to confront the challenges surrounding English language teaching, there is a need to understand teachers and to prepare activities that suit their language teaching needs. Moreover teachers demoralised by policy settings that have disempowered them and curricula that assign them a peripheral role in education need to seek avenues for recognition to lift their self-esteem, morale, motivation and attitude toward teaching English. A model was designed for effective teacher role- the voice model (Table 1) for the teaching profession. The voice is a space within which teachers as educational practitioners can explore their belief-systems, interest and the real meaningful experiences they confront in their profession. Voice is positive, oral and conversational.

Table 1: Voice Model

VOICE MODEL*

Ambigapathy, 2000

| VOICE | → | INTRAVOICE ATTITUDE MOTIVATION |

↓

| VOICING | → | READING SEEING LISTENING RESEARCHING MULTILITERACIES |

↓

| VOICES | → | INTERVOICE WORKPLACE VOICE *TEACHER VOICE* *STUDENT VOICE* NON-VOICE *COLLABORATION* FEEDBACK |

↓

| MULTIVOICES | → | PARENTS COMMUNITY OTHERS |

↓

| REVOICED | → | OUTCOME PRODUCT |
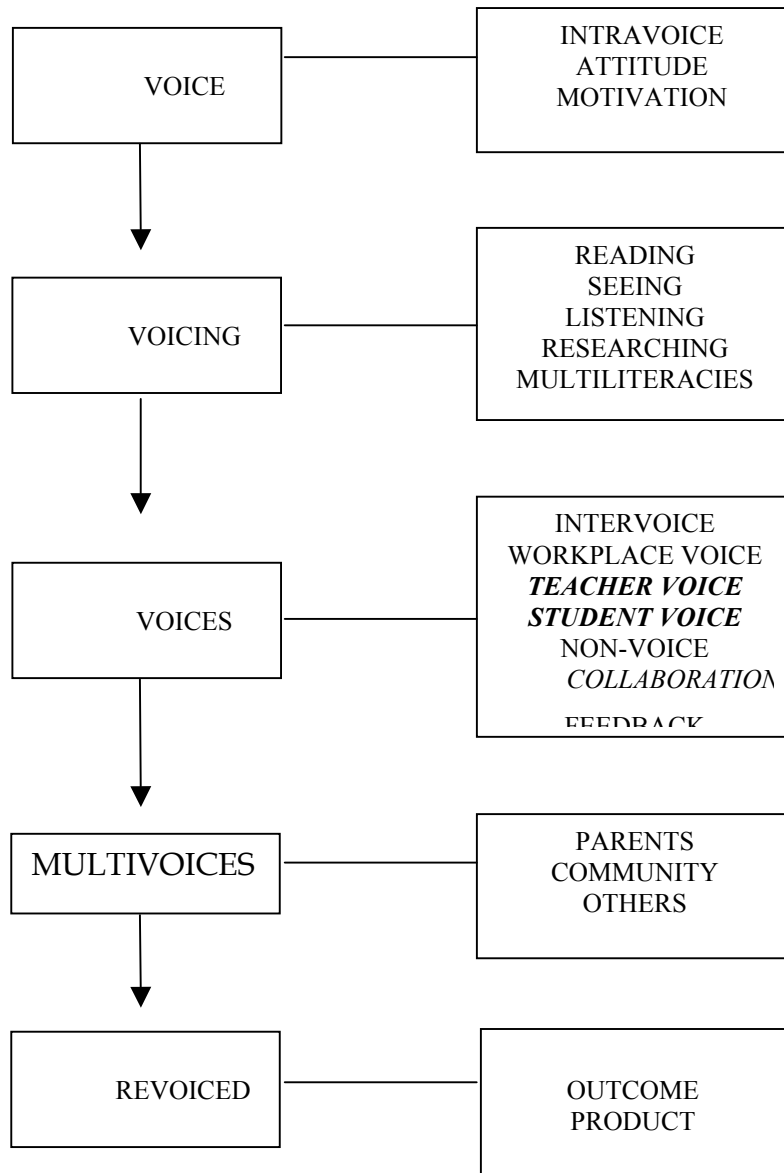
Design of the study

To test the model, a study was conducted on 80 English Teachers. The survey was carried out in Kelantan, Pahang, Perlis and Kedah. All the 64 female teachers and 16

male teachers had seven to twelve years of teaching experience. A similar study using the same design and instruments was carried out in the state of Perak, involving 90 English teachers. A third study was conducted on 30 English language teachers teaching in vernacular Tamil primary schools in the state of Penang. Overall a total of 200 respondents from six states were involved in the study. Primarily the study is a descriptive, comparative and exploratory one. Though the study was conducted in different locations data gathered from the respondents has been analysed collectively to identify themes and perspectives common in all.

Structured questionnaires and cross-validated interviews by personals were used to conduct the survey. It contained categories, which focused on eliciting elements of teachers' beliefs, attitudes, personal learning experience and learning behaviour. It was administered to this group of teachers to verify their beliefs about the teaching and learning of the English language as well as their general views about the profession. It also examined the profile and background of these language teachers to analyse the learning environment in which they grew up in and are continuously exposed to. Pandian (2000) believes that this line of inquiry would yield data on an important dimension in teacher effectiveness; teacher knowledge, thinking, subject matter and practical knowledge.

The various categories of the structured questionnaire was instrumental in gathering data on the teachers' background knowledge about the profession shaped by pre-training experiences, especially childhood influences; perceptions about teaching

English as a second language; their IT and computer knowledge and use in the classroom and interaction and sharing of knowledge and professional experience with their colleagues. Interviews were carried out to illicit responses on teachers' beliefs and perceptions about the profession. They were also asked to provide suggestions on how to improve the standard of the language in the country, notably in view of the teaching factor. During the course of the interview some respondents spontaneously provided insights and comments what is expected of an English language teacher and the criterion that should be used to determine the hiring of new teachers.

VOICE

The voice involves a critical engagement by teachers which include a questioning of their own beliefs, attitudes and teaching methods toi gain awareness of underlying problems related to English language teaching.

Research findings

With reference to the study done in Perak 56.5% of the teachers stated that they had joined the profession because of their own interest and ambition, 19.4% due to parental influence, 12.9% due to the fringe benefits such as holidays and perks while 11.3% cited other reasons such as "Last option," "No choice" and "Only thing qualified for." On the question of who influenced them to become teachers, 33% of the respondents from the vernacular Tamil schools cited the influence of parents and relatives to be motivating factor. Another 30% cited childhood ambition, while 10%

believed that their teachers were a source of inspiration to them. Finally 20% cited the same circumstantial reasons as the respondents from Perak.

Discussion

In the educational environment, teachers as change agents are the school's greatest assets as good teachers produce good students. Also, all students do not have the opportunity to come from good homes, but all students have the opportunity to go to good schools. By good schools I mean schools with teachers who have the competency to teach the language.

In the first place, teachers have to engage in a reflexive activity where teachers as agents or subjects seek self-determination. I call this level the intravoice. At the immediate school setting, teachers need to ask themselves whether they want to be in the profession and interrogate the assumption that teaching is a half-day's work. Put differently, teachers need to determine: if they are ready to spend more that half a day in school and whether they are prepared to establish alliances with students, other teachers and the school administrators. Dewey in his works called the teacher a 'prophet', one who is called to maintain social order and its growth (Karges-Bone, 1997). Lickona (1997:65) believes that the relationship between teachers and the students is the foundation of everything that we hope for in character education in future.

Thus, teachers need to boost their self-esteem, morale, motivation and attitude towards teaching and learning English through self-discovery or their intravoices. When

teachers are more reflective of their own actions, they can be prevented from following the fad and fashions of pedagogy without insight and the ability to critically test and evaluate such ideas. By constantly questioning themselves, their methods and their experiences, teachers will gain awareness of underlying problems, thereby enabling solutions to be effectively sought.

This will enable teachers to take up leadership roles confidently. When teachers have this mindset, they would be motivated to create new and creative pedagogical methods. Hence, problems faced by the teachers interviewed in this study such as the inability to implement ideas learnt in college, lack of motivation among students and insufficient resources would no longer be an issue. Teacher student relationship would improve, making the teaching and learning process more effective.

VOICING

As professionals teachers need to continually keep abreast with the latest developments in their profession. Professional development courses are usually organised by the state and national governing bodies such as the Ministry of Education, particulary departments such as the Curriculum Development Center. Apart from attending this short term courses teachers need to act on their own initiative by reading and attending symposiums and seminars where possible.

Research Finding

The study on Tamil school teachers revealed that 36% of the respondents spent their free time reading. Most of the reading is done in English, Bahasa Malaysia or Tamil. Nevertheless, time spent on reading in English is only between 1-5 hours per week. 57% do not read in Tamil while 27% do not read anything in Bahasa Malaysia. Leisure time activities include reading the news papers and listening to the radio while 24% prefer surfing the net. Notably the ladies prefered doing household chores and spending time with families. The study conducted in Perak revealed that 80% liked to spend their free-time with family or indulging in hobbies such as gardening, chess, golf and other games. Another 10% spend their free-time teaching tuition, being involved in trade unionism, NGOs' and religious activities. Only 10% of the respondents spend their free-time reading.

Discussion

When the intravoice is answered and is positive towards seeking improvement, and when this is combined with the correct attitude and motivation, there is scope for developing action strategies. It is essential for teachers to appreciate the demands of the profession, and on being a teacher-researcher. Based on a study on the relationship between perceptions of teaching concerns, teacher efficacy and selected teacher characteristics, Ghaith and Shaaban (1998) found that teachers would most likely be concerned about all the various teaching problems only if they were interested in the issues and concerns of the teaching proffession in the first place.

Voicing

Voicing here refers to the teacher being multiliterate and engaging in dialogue and active participation in reading, writing, listening and developing action. Teaching also involves researching and this culture of research has to be nurtured among teachers. In order to be researchers, teachers must work towards multiliteracy, hat is being knowledgeable in the content area, reading and observing about teaching and learning and enhancing skills in information technology. However findings from the survey shows that overall 60 percent of the teachers interviewed spend less than an hour on leisure readings.

Thus, teachers need to be involved in active listening, seeing and reading. For example, teachers need to know the variety of Englishes present in their social-cultural context and their appropriateness for the students. It is not enough that teachers' work should be studied, they need to study it themselves (Stenhouse 1972: 143). By being multiliterate, teachers will not only be highly informed but also be able to conduct their lessons authoritatively and effectively. Students will also be able to follow the language lessons without complication or confusion.

Research Findings

In relation to computer literacy more than 80% of the respondents in all three studies were computer literate. 24% of the respondents in Penang stated that they liked to surf the net in their leisure time. However they were not able to use their computer

knowledge for teaching purposes as most Tamil schools lacked the necessary facilities. Respondents teaching in main stream secondary and primary schools where computer facilities were generally available stated that computer literacy was beneficial for surfing the net (54%), preparing lessons and teaching aids (86%), e-mail (48%), referencing (42%) and classroom administration such as tabulating exam scores and attendance (40%).

Discussion

In 1997, the 'Smart Schools in Malaysia' concept was born with the hope to equip and prepare the younger generation for tomorrows challenge. The Smart School concept, one of the seven flagship applications of the Multimedia Super Corridor was launched in 1999 with ninety schools participating in its pilot program. The use of computer technology has been given much weight in the project where the government hopes to implement the concept in 10,000 schools in the country by the year 2010. This ambitious vision would involve nearly 5.8 million students and require the expertise of 450,000 teachers (Government of Malaysia, 1997, p7).

In order to live up to the call of this vision, teachers need be familiar with Information and Communication Technology (ICT). More than just having surface knowledge, teachers must devote themselves to start applying ICT in the classrooms with whatever resources available.

VOICES

Interaction between teachers is an important factor in the staffroom. It promotes goodwill and cooperation among teachers as well as informal identication of problem areas which can be tackled together. Exchange of ideas and experieces promotes professional development while strenghtening relationships.

Research Findings

The study revealed that 93% of the respondents do mix with collegues or friends from other ethnic groups. This is an important factor considering that Malaysia is a country of diverse ethnic groups. Good social relationships among teachers would also serve as a role model for their students. Nevertheless more than 90% of the respondents from the Tamil vernacular schools stated that their discussions with collegues were often of genral nature and it seldom related to second language teaching and learning problems. In contradiction the study in Perak revealed that 70% of the teachers often discussed problems related to the teaching and learning of the English language or problems related to teaching in general.

Discussion

When teachers are multiliterate, they have the confidence to work and confront classroom problems independently. Teachers, however, cannot operate in isolation. Today teachers need to work with other practicing teachers. According to a survey conducted by the National Centre for Educational Statistics of America, 45.6 percent of

former teachers left the profession due to lack of administrative support (Chester and Beaudin, 1996: 235).

Teachers need to review periodically the nature and effectiveness of their own teaching practice and continue to develop practical knowledge with personal reflection and interaction with other teachers. Networking and collaboration are widely used as means of extending solidarity and professional reinforcement among teachers. Discussion and exchange of ideas among peers, colleagues and research members of the school community can impel a context which conveys legitimacy to English language concerns. Schools are places for teachers to learn as well as to teach. Another interesting research finding in Malaysia (Pandian, 2000) reveals a lack of collaboration on professional development as English Language teachers were not meeting formally or informally to share their teaching experiences and problems. This generates very little sharing of ideas on teachers' common conflicts related to English language teaching and a variety of experiences that surround English language teaching goes unappreciated.

At the school setting, teachers play a primary role in maintaining or changing the decline in the language. Teaching is not an act of displaying a physical presence in the classroom and a mechanical running of lessons that are textbook-centred. Teaching involves an understanding of the different needs of the students and preparing activities that would suit their language needs. Each student is different from another. Therefore theachers need to face new challenges, even if one has vast experience in the profession (Su, 1997:328). There need to be a deep desire for the teachers to communicate their values and convictions to the student (Charles Glenn, 1998).

Teaching is a unique profession as it encompasses the nurturing of relationships, thoughtfulness and care. Regrettably, not many teachers fully comprehend the teaching profession. In Japan and China for example, new teachers watch other teachers at length, discuss problems of practice, present and critique demonstration lessons, and, with groups of colleagues, imagine and act out how students might respond to certain presentations of material. This form of teacher initiated professional development is glaringly absent in the Malaysian context.

The contemporary English teaching and learning agenda is one that is plagued with many questions:

Do we teach grammar deductively or inductively or do we need to teach it all in a formal context? What is the role of the English language in making meanings to articulate local and global social experiences, especially in the age of rapid technological and cultural change? How do we deal with words and grammatical structures that were not acceptable ten years ago and have now gained legitimacy in the present era? How do we deal with the local variants of English, heavily tinged with the influence of mother tongue and local languages-Manglish for instance? The appropriateness of the types or variety of Englishes used in classrooms with regard to community needs is highly contentious issues.

Change can be so frustratingly slow. It takes practice to consult with other teachers; to listen, re-state another's concerns, ask questions and offer suggestions. It takes practice to facilitate a discussion, to make sure that everyone is heard, and to keep the conversation focused on key issues. Yet the rewards far outweigh the difficulties. Sometimes a question posed will spur lively discussions from the group. However, even when colleagues cannot offer specific ideas, encouragement and solidarity can be actualised to enable teachers to confront issues linked to teaching and learning (Au, 1997).

Aside from teacher voices, students' input plays a vital part in providing feedback on the effectiveness of English lessons and the methods used in the classrooms. This continued feedback enables a teacher to determine the ability of a given method or to find a solution to a classroom problem. Middle-level students' interactions with teachers help to form the context within which their sense of self is fostered. (Bandura, 1986; Brantlinger, 1993).

It is vital that teachers collaborate to organise such activities as these can be valuable devices that can encourage mutual support, shared expertise and advice on building teachers' advancement in English language teaching.

MULTIVOICES

In order to find solutions to the teaching and learning English problems, other than collaborating with colleagues, teachers should also consult with experts,

professionals, parents and others in the community to discuss or solve the school related problems.

Research Findings

Almost all schools have parent-teacher associations and other forms of community links. Interestingly the study found that many of the associations were not responding actively to discussions on learning experiences and the roles that community members can take up to improve the learning of English. Many of the community organisations remained detached from the learning activities of the school.

Discussion

I refer to the connecting of voices of different groups with a similar interest as multivoices. An example of this in the Malaysian context is the Universiti Kebangsaan Malaysia's (UKM) Educational Research Group where teachers and academicians who have similar interests interact and share their ideas about their research work (Mohamed Amin Embi, 1999).

The Faribault schools in Minnesota parctice regional sharing of learning resources. Through integrated technology of video systems to transmit television programmes, these schools have the chance to exchange useful information on projects and assessment, details of timetables and the latest information (Wheeler, 2000:2). Efforts such as these can start locally with teachers and schools collaborating to create a network for educational purposes.

The participation of parents provides opportunities to share observations, strategies and philosophies on English language teaching. Morningstar (1999) found that including parents as informed contributors in her literacy assessments on her kindergarteners provided a valuable learning experience for her students, their parents and herself. Parents became more aware of the broader notions of literacy and the actions that could be attributed to literacy. Also, Schneider and Cole (1993) have found that parents involvement with school activities has much to do with grades received by students in school (Ogawa, 1998:8).

There need to be more positive communication among parents and teachers. Teachers need to be effective and go the extra mile to bridge the gap with parents. Phone calls to parents creates a personal touch in the relationship between them. This is almost not practiced in Malaysia. Conversations with parents would show that the teacher is serious about the welfare of the students. A cycle of trust begins to build and soon both the parents and teachers would be more involved in student education. Then, Parent-Teacher meetings and conferences would be a platform where smooth flow of ideas would generate and feedbacks discussed. Home visits would futher strengthen the bond that was created through telephone conversations and conferences. Through these home visits the teacher enters the 'after-school life' of the students. Then maybe, the teacher would understand why certain students behave the way they do (Jonson, 1999).

REVOICED

This model shows that teachers need self-discovery, and collaboration with other teachers and the wider community.

Research Findings

From the survey, 66.2 percent of teachers find that their college education is not relevant to the teaching of English in their current schools. If the teachers voice is not heard, their problems would continue to grow and the process would affect the students eduction. Following this are some of the comments made by teachers with regard to the profession and teaching of English as asecond language in the country:

● "Including the literature component has definitely added variety to the teaching   and learning of English. However it seems difficult to get the message across to   the weaker lot".

● "Subjects such as mathematics, general science, physics, chemistry and biology

should be taught in English".

● "Language must not be taught for the purpose of testing alone. It must be taught to expand skills and horizons".

● "The CDC (Curriculum Development Centre) should have a long term comprehensive policy planning committee. It should ideally constitute teachers from urban and rural schools and not PhD's from the universities and politicians".

Discussion

Continued feedback is critical to solve the teaching/learning problems in school. Revoiced here refers to an outcome, product or possible line of action that is derived from teachers voices and interests, and this is taking place due to the informed decisions and active participation by the teachers and the school concerned in addressing English language learning and teaching.

Conclusion

The reason the teachers have joined the teaching profession is to make a difference in the lives of school children. Teaching involves a moral responsibility and teachers need to continually rediscover and renew their skills to respond to the rapid changes in the learning environment. Building students character, intelligence and inculcating in them the values that would last a life time is tough business even for the most dedicated teacher, yet John Dewey believes that "The intensity of the desire measures the strenght of the efforts that will be put forth."(qtd. Bone, 1998). Meanwhile, governing bodies and heads of schools should provide a certain amount of autonomy for teachers to excersice control over the curriculum. As the person in the midst of the learning conundrum teachers should be given the opportunity to make changes to the curiculum to maximise learning environments. The provision of autonomy and support from administraters would provide the grounds for teachers to become innovative and resourceful notably in listening to the voices and multivoices in their immediate

environment and revoicing it in a productive manner rather than dwell on self castigation and fault finding when things fail to work.

The voice model might help identify and work through some key questions about the role of English language teaching in making meanings about teaching expereiences. The model might not solve all the problems related to English language teaching but it is likely to make teachers feel better about their practices and reap learning gains for students. It is hoped that teachers would be able to use this model as a guide to solve their professional problems.

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PROCEEDINGS   THEME 1   THEME 2   THEME 3   THEME 4

THE STATE AS 'MORAL EDUCATOR' VIA YOUTH POLICY IN INDOCHINA DURING WORLD WAR II

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Abstract

This article offers a historical study of the case of Indochina during World War II to explore the role of the state as "moral educator" via projects directed toward the formation of youth in Indochina. The years from 1940 to 1945 were a time of political instability, due to the stationing of Japanese troops in Indochina and their ideological challenge to "white" authority in the area, Thai irredentism, and indigenous nationalisms. French officials responded to this situation by building youth corps to channel youngsters' allegiance toward the colonial state.

First, this piece wants to be an intervention into debates on the construction of political hegemony looking specifically at state-sponsored extra-curriculum educational activities for the youth. Second, the paper presents the legacy of colonial practice regarding educational youth policies to the Diem's regime in South Vietnam in the 1950s and 1960s and in Cambodia under the rule of Norodom Sihanouk. Using a socialization model, this article wants to raise the danger of authoritarian states transmitting undemocratic ideals and attitudes from the official culture to youngsters through informal education.

This article offers a historical study of the case of Indochina during World War II to explore the role of the state as "moral educator" via projects directed toward the formation of youth in Indochina. The years from 1940 to 1945 were a time of political instability, due to the stationing of Japanese troops in Indochina and their ideological challenge to "white" authority in the area, Thai irredentism, and indigenous nationalisms. French officials responded to this situation by building youth corps to channel youngsters' allegiance toward the colonial state.

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Historical context

The French military first occupied what was thought to be a commercial colony of commerce in the 1860s, while settlers arrived in the 1870s (Stoler, 1997: 198). As was typical in colonies governed by western states, there were four important sets of Western actors in Indochina: the navy/military, civil servants, merchants/businessmen, and missionaries. These groups planted the roots of colonization and accounted for most of

the 59,000 French people who lived in Indochina in 1940. During World War II, in addition to this typical, if multifaceted, French colonial population, the region hosted the newly arrived Japanese occupiers. About 35,000 soldiers camped on Indochinese soil, mainly in urban areas (Devillers, 1952: 81). The K*empeitai* or military police arrived in December 1941 with the mission of ensuring the security of the Japanese army. An Office of Information in the Diplomatic Mission as well as some schools taught the Japanese language. Japanese-sponsored reviews written in *quoc-ngu* (the Vietnamese written system rendered in a roman alphabet) promoted the invaders' Pan-Asian ideas. Military parades, athletic competitions, concerts, films, fairs, and exhibitions promoting the cultural life and military power of the Japanese nation - and demystifying the white man's superiority - were organized by the Information Services of the Japanese Embassy and the Information Bureau of the Southern Army General Headquarters. From 1942 on, these forces strongly pushed the theme of "Asia for Asians" (Vu Chieu Ngu, 1984: 2).

Youth project

From 1940 to 1945, officials built a youth initiative according to the French model, borrowing ideas and techniques from the métropole, in the hope that these new institutions would better integrate natives into the French imperial system. The goal was to build faithful imperial subjects and conservative political organizations by stimulating patriotic feeling and channeling it toward France and Marshal Pétain. Such activities also promised to divert youth from subversive political movements. Participation in youth organizations mushroomed in Indochina over these five years, gaining over a

million members (Hammer, 1966: 32)   The Governor General of Indochina reported 600,000 members in February 1944 alone (At the time, this represented 15% of the four million youth in Indochina. Telegram n. 783, agence FOM, box 272, file 451, centre des Archives d'Outre-Mer, Aix-en-Provence [hereafter CAOM].   The estimation of four million youth was drawn from Sarlat, J. "Sports et Jeunesse où en sommes-nous?," *Indochine*, n. 108, 9/24/1942, 2).

Within each colony, youth movements were first organized at the provincial level around a "Local Chief" and some provincial schools. At the colony level, a broad umbrella organization called "Youth of French Empire" [*Jeunesse d'Empire Français*] united existing movements such as the Scouts and various Christian and new secular groups, sporting leagues, "school youth groups" [*jeunesse scolaire*], and "local assemblies" [*sections de rassemblement*]. The local assemblies were a means to control and organize youth who belonged neither to the school groups and sporting leagues, nor to a specialized youth organization, such as the Scouts *Indochine*, n. 152, 7/29/1944, 13). Youth of French Empire, an exact analog to the métropole's Youth of France [*Jeunesse de France*], carried the same motto as the original: "United and Strong in Order to Serve." These organizations aimed to teach youngsters to obey instructions, to develop a spirit of social solidarity, to foster harmony among ethnicities, and to hold patriotic values. They carried the French Vichy regime's focus on youth as the force that would make France stable and strong after the humiliating defeat of 1940.   Other youth movements created after 1940 varied somewhat in the different locales: "Young

Campers" [*Jeunes Campeurs*] in Cochinchina became "Young Teams" [*Jeunes Equipes*]

in Tonkin, or "Youth of Annam" [*Jeunes d'Annam*], or "Young Laotians" *[Jeunes Lao]*.

Table 1. Organizational Structure of Youth of French Empire in Indochina.

Source: No author, "L'organisation de la jeunesse en Indochine," *Le Nouveau Laos*, no.

15, August 1, 1943, p. 3.

Youth of French Empire					
Specialized movements		School youth Groups	Sporting Organizations		Local assemblies
Old ones	new ones		Clubs		
scouts, religious groups	Young Campers Young Teams of Tonkin Youth of Annam Young Laotians Yuvan				target youth who did not belong to any of the 3 prior groups
Keep their own method and pedagogy	Physical education Choral singing First-aid Supervised excursions		Tournaments competitions		Physical education Choral singing First-aid Supervised excursions

As the sociologist Emile Durkheim was concerned with the breakdown of society – lack

of cohesion and solidarity – as it evolved from a traditional to an industrial society,

colonial officials worried that the Japanese occupation was destabilizing the Indochinese

community. Fearing the breakdown of colonial authority, French officials were deeply

interested in promoting values to unify the Indochinese population behind the colonial

state. Borrowing from Durkheim's work, *Moral Education*, I hope to demonstrate how the colonial state became a "moral educator" transmitting knowledge and behaviors to youngsters via youth corps to maintain order in society. It was part of the hegemonic project of the colonial officials to have the youth to embrace the values of the state (This does not imply that youngsters did not have a hidden transcript through which they criticized this relationship between them and the colonial state. See James Scott, *Domination and the Arts of Resistance: Hidden Transcripts*). The activities and ideology within these youth associations aimed at having the youth to interiorize the colonial moral order defined according to three features:

A. A set of rules defining proper behaviors

For functionalists, education is thought to integrate the individual to the ideological or cognitive community. According to Durkheim, human beings are by nature egoistic, thus the need to discipline them. Therefore, the first task of education is to teach the habit of discipline, or more specifically, the spirit of discipline. "The fundamental element of morality is discipline," (Durkheim, 1961: 31) i.e., to be disciplined, to always behave according to the secular moral rules in any given situation. In the Indochinese case, the spirit of discipline was going to be instilled into youngsters by leaders who were at the head of teams within youth corps. The review *Sports Jeunesse d'Indochine*, created by the General Commissariat for Physical Education, Sports, and Youth, published different lectures on the topic of "leader." The two qualities required of the leaders is a total devotion to "an elevated ideal" and the ability to communicate and inspire subordinates

with their devotion to the imperial state. The leader must remain human, with a strong "character of the heart," serve as an example of discipline, and gain respect from others through his example (*Sports Jeunesse d'Indochine*, n. 46, June 24, 1943, pp. 1, 8-9; n. 48, July 8, 1943; n. 49, July 15, 1943).

The spirit of discipline is taught by developing youngsters' **taste for regular life**. "Morality . . . is basically a discipline. All discipline has a double objective: to promote a certain regularity in people's conduct, and to provide them with determinate goals that at the same time limit their horizons." (Durkheim, 1961:. 47). A taste for regular life was developed through specific repetitive activities within these organizations. This movement, that spread the ideal of a popular manly culture, made exercise part of a regular ritual. Daily physical activities would encourage to develop the "virile" qualities for the body, such as strength, resistance, speed, and spring, and "virile" attitudes of the mind, such as energy, will, courage, cool, and obedience (Giolitto, 1991: 182, 442).

Second, the spirit of discipline is made of **a sense of moderation** and **the habit to contain oneself's desires**. "It [moral discipline] performs an important function in forming character and personality in general. In fact, the most essential element of character is this capacity for restraint or – as they say – of inhibition, which allows us to contain our passion, our desires, our habits, and subjects them to law" (Durkhiem, 1961: 46). Governor General of Indochina strongly supported youth summer camps as a means "to force collective discipline" upon youth, and he demanded that authorities develop as many summer camps as possible for the youngsters participating in youth corps (Note n. 187/SPT, Hanoi, March 6, 1943,Marie-Hanoi, reference 2891, National Archives Center

N. 1, Hanoi, [hereafter, VNNA]. The general commissariat also believed that the "rough life" of camping was an experience that taught youngsters "respect for work, a spirit of mutual help, abnegation, and simplicity." In parallel, the general commissariat for youth-sports encouraged camping as a tool for teaching solidarity to its members who learned to "give a hand" to each other when facing a rough nature. Thus "the atmosphere of nature purifies and elevates his soul, . . . and it makes him benevolent. The leader can thus have a creative effect on the boy, and it is an occasion that he must not miss" (Service Jeunesse Commissariat général, "Jeunesse: Le Camp," *La Tribune d'Indochine*, June 10, 1942.). Vacation camps were not only intended for relaxation, but they were also meant for organizing work projects useful for the local community, such as one in Siemreap where Cambodian youth participated in archeological excavations. Following Decoux's wishes, camp officials had to maintain an atmosphere of discipline and "high moral and patriotic behavior"(Decoux, Dalat, May 26, 1943, in "Question d'éducation physique et de formation morale de la jeunesse indochinoise à la session de juillet 1942 du Conseil Fédéral indochinois," 1942, GGI, reference D.271F.30, n. 1310, VNNA.) The youth corps called Young Campers recommended "plunging [the young people] into a rough and sober [outdoor] life, to make them gain vigor and guts" ("Unir pour servir," *La Tribune Indochinoise*, July 7, 9141, pp. 1-2). Officials believed that rough camping in nature forged character – an important goal of these organizations. Character meant the ability "to act firmly with promptness and precision in all the important circumstances of life." The man with a strong will could obey his reason rather than his passions. The task was none other than to rebuild a strong French empire ("Quelques notes à méditer. Pour être un homme se connaître, se conquérir, se donner," *Cordée*, n. 7, June-July 1944,

pp. 12-14). In a "Durkheimian" way, these camps aimed to teach youngsters' moderation by putting the community's interests before their own interests. Through all these rules, the goal was to discipline the body and the mind to overcome degeneration at the roots of French defeat at the hands of Germany and Japan as well as to build strong bodies in case of further external attacks.

 Finally, **reward** and **punishments** were part of the pedagogy to teach this spirit of discipline especially targeting leaders, the one building this spirit among the youth. Authorities sanctioned various cadres for not practicing their trade correctly, and they threatened to revoke cadres who botched their jobs (Maurice Ducoroy, "le Chef vous parle . . ," *Sports-Jeunesse d'Indochine*, Southern edition, n. 41, May 20, 1943, p. 3). For instance, Nguyen Quoc Bao received a reprimand for not regularly attending proficiency swimming lessons; Le Truong San was suspended for a month for being involved in a scandal; Bogdanovitch received a warning for "negligence"; and Nguyen Duc Ho was deprived of his post for his "usual indiscipline, trouble making, and lack of abilities" ("Sanctions," *Le Bulletin des Anciens Elèves de l'Ecole Supérieure d'Education Physique de l'Indochine*, n. 9, July 1943, p. 23).

B. Attachment to the imperial nation

As the table 1 on page four suggests, these new organizations offered an assortment of recreational activities, including physical education, singing, first-aid instruction, and excursions. Colonial leaders, on the one hand, saw these activities as social and cultural exercises to develop patriotic feelings for France and to mold faithful subjects and

citizens. As Navy Captain Maurice Ducoroy, head of Indochina's General Commissariat for Physical Education, Sport, and Youth explained: "I desire to reach all the youth, French as well as Annamite, in the cities as well as in the countryside, to instill into them a sense of effort and work, and to fight against revolutionary or ultranationalist blind beliefs. I hope to reach this goal through youth camps, the teaching of morals, patriotic sessions, and sports" (quoted in "La tâche de renaissance parmi la jeunesse," *L'Annam Nouveau*, July 13, 1941, p. 4).

The French sought to employ youth organizations to promote a multi-tiered patriotism - i.e., the love of a people for its colonial country (*pays*), for the colonial federation of Indochina (the colonies and protectorates of Tonkin, Annam, Cochinchina, Laos, and Cambodia), and for the French empire and the métropole - without stimulating an indigenous nationalist political program that pursued independence from external control (Huynh Kim Khanh, 1982: 26-34).

It was a critical set of distinctions for the French to draw, for many of their subjects rejected the imperial model of the ruling nation-state and sought to replace it with one of their own making. The Governor General of Indochina conceptualized the dangerous problem in this way:

> Although I actually encouraged specific "patriotisms," on the other hand I formally condemned "nationalisms" of all kinds, because they had a xenophobic and anti-French tendency, and received their orders from abroad (Decoux, 149: 389).

More specifically, at the school of instructors in general and physical education in Indochina – known by its acronym ESEPIC - the entrance of the stadium bore the inscribed motto of the school and of youth organizations more generally: "United and strong in order to serve" (Ducoroy, 1949: 158). When they finished this training, with "knees on the ground, the new graduates swore to serve with loyalty, honor and discipline, France and their respective countries" (Ducoroy, 1949: 160). These rituals developed and imposed a perception of members as faithful and devoted imperial subjects.

Meanwhile, the cry of the youth at the beginning and end of a demonstration points again to the patterns by which youth behavior was disciplined in the public sphere:

Leader: "Youth!"   Youth answer: "France (Annam, Cambodia, Laos)!"

Leader: "To Serve!"   Youth answer: "Always!" ("Circulaires Officielles," *Bulletin des Anciens Elèves de l'Ecole Supérieur d'Education Physique de l'Indochine*, n. 13, April 1944, pp. 17-18). The sportsmen's oath indicated how the state devised the youngsters' relationship to the state in terms of duties while never mentioning their rights:

Leader: "Sportsmen of Indochina – swear to be frank and loyal in the stadiums and in everyday life."

Youth Answer: "I swear."

Leader: "Swear to practice mutual help – to be among ourselves like sons of the same family, without jealousy or hatred."

Youth Answer: "I swear."

Leader: "Swear to obey without discussion your leaders – to be tenacious in your effort and to submit yourself to necessary discipline."

Youth Answer: "I swear."

Leader: "Swear to become strong in order to always serve with honor."

Youth Answer: "I swear" ("Serment de la Jeunesse Sportive d'Indochine," *Voix d'Empire*, n. 45, November 23, 1941, p. 1). Finally, standing at attention was required when anthems were played (Note N. 1680-CGSJ, Saigon, September 30, 1943, in "Organisation sportive et organisation de la jeunesse, 1942," Mairie-Hanoi, reference 2891, VNNA).

C. To know the reasons of our behaviors

The leaders of youth corps had to show a devotion to the ideal of the colonial state, to demonstrate through their behaviors that moral rules were superior to the people, for the good of society, to show how these moral rules were obeyed out of reason and respect. Youngsters were taught the partial reasons for their moral conduct. Indeed, leaders emphasized first the social and political unity in the face of internal and external threats. Second, in response, they taught healthy habits for youngsters as a source of national strength, the training of character through patrols or small groups, and finally their rejection of urban existence for the open-air life. Third, colonial officials hold similar visions of their respective nation. The fragile and unstable nation, in this view, needed protection against its enemies and thus required social regeneration – the training of body and character and the teaching of patriotism. They wanted to shape citizens who would be active and responsible toward others. In order to do so, officials called for an education that would encompassed physical activities and promote "the cult of effort." One of the key words used by the commissariat of sport-youth in Indochina – was

débrouillardise, cleverness or resourcefulness. Children and youngsters would have to learn through these educational processes to adapt themselves to every kind of situation by using any type of their varied intellectual and physical resources. There was also a strong desire to reconcile action and thought. However, youngsters were taught that this resourcefulness was to be used to serve an ideal. The notion to serve – to put oneself in the service of the community – was at the heart of young organizations' philosophy. The scout motto "to serve" would be borrowed by these youth corps.

The Diem's regime and Norodom Sihanouk in Cambodia

As for Indochina, which remained after the final departure of France in the 1950s an unstable environment of civil war, war, and contested forms of state-building, the taming of youth — that is the channeling of their potential for contesting authorities into supporting leaders and their causes — was crucial to the fate of a number of competing leaders, including Sihanouk, and Ngo Dinh Diem. The anticommunist Ngo Dinh Diem, prime minister under Bao Dai and later the head of the new Republic of South Vietnam from 1954 to 1963, also deployed a colonial approach to its youth policy. Like the colonial power it followed, this new regime did not have the full support of the Vietnamese population in its war against a communist insurgency. A National Committee of Youth was constituted by this new regime in September 1954, gathering representatives of youth movements who agreed on the need for a centralized organism for the management of youth (V.P. no. 1300, file F III 2 16, in HCI, SPCE 55, CAOM). For instance, the first graduating class of youth cadres pledged an oath to the regime,

promising "to be faithful to the motherland and to serve the people," while a parade of all of the youth organizations ended the ceremony. In his speech, Ngo Dinh Diem asked them to "rid yourself of all egoism, escape your isolation. . . . Live in groups, cultivate the spirit of the team. Unite to create a powerful youth movement. . . . Your strength, coming from your union, will only be dedicated to the service of the nation, to safeguarding liberty" (V.P. no. 1381, file F III 274, in HCI, SPCE 55, CAOM).

Through these youth movements, cadres would teach the spirit of the team to youth, which, through the practice of sport and camping, would develop "a healthy and vigorous body, and . . . their virile qualities," as the minister of work and youth, Dr. Nguyen Tang Nguyen, put it (V.P. no. 1381, file F III 274, in HCI, SPCE 49, CAOM). The South Vietnamese situation in 1954 was also similar to the World War II French context during the German occupation in facing the problem of large numbers of dislocated youth wandering about in the aftermath of the "debacle." The Southern Vietnamese regime faced the arrival of "thousands of youngsters" from the North who wanted to create a "Youth City" by establishing residence halls. Here the directors would teach 10,000 youngsters craft skills and find them jobs. The youths would receive an intellectual, ideological, and physical education and learn to live communally (V.P. no. 133, file F III 2 16, in HCI, SPCE 55, CAOM). Once again, Vietnam needed faithful youth's active participation in the building of a new state at a moment of extreme political uncertainty, where different forces competed for political control.

Cambodia was the country where youth was most highly integrated into state-sponsored youth organizations (Rapport du capitaine de Vaisseau Ducoroy, Saigon, 9/22/45, in

HCI, conspol 247, CAOM). After the Japanese were defeated in 1945, apart from Scouting organizations, "the movement sunk to oblivion" (Martin 1994: 38). After enjoying independence for a short term, with the nationalist Son Ngoc Thanh B returned from exile in Japan B as prime minister, British and then French troops started to arrive in Cambodia by September 1945. With the return of the French, Sihanouk kept his throne, while Son Ngo Thanh departed for exile in France. The French and Sihanouk signed the Modus Vivendi agreement of January 1946 granting domestic independence to Cambodia and permitting the creation of political parties for the first time. A consultative assembly was to be chosen to draft a constitution. France still controlled the country=s foreign policy and retained an advisory relationship with the government of Prince Sisowath Monireth. Soon, elections for the consultative assembly would occur, which would eventually result in a parliamentary monarchy. The unintended consequence of these elections, however, was the stimulation of the anti-French and anti-Sihanouk Democratic Party, which drafted a constitution creating a strong legislature and a weak executive. This constitution was promulgated in 1947. There ensued for several years a series of weak regimes that struggled both with France and with King Sihanouk. By 1951, Son Ngoc Thanh returned to Cambodia and created a guerilla movement aimed at Sihanouk and the French. Seeking national independence and attempting to counteract independent revolutionary forces, Sihanouk launched his movement for independence in February 1953 (Vickery, 1986: 10-11).

In 1952 a wave of strikes hit the school system, where students held antimonarchic positions and criticized Sihanouk's dealings with France on independence. The king

responded in 1953 by reconstituting the Yuvan, to be managed by the military and to organize for "military preparation." His cousin Prince Sirik Matak headed the project and contacted the prior chiefs of this movement to remove "the youth from pernicious political influences" (In Extrait du B.Q.R. no. 266/RG du 15/1/1953 du Cambodge; Formation de la jeunesse, NQ. 14 janvier 1953; both in HCI, SPCE 106, file F III 7, 10, CAOM). The Yuvan movement was perceived by Sihanouk as a tool for monarchic repression and absolutist state-building, inheriting the French rejection of political pluralism. "This asset [youth movements] was useful for King Sihanouk, who in 1953 easily remobilized the assemblages under the name of *chivapol* (active forces) to support him in his royal crusade for independence" (Martin 1994: 38).

Conclusion

The socialization model appears to be the most appropriated model to stress the idea that informal education with youth associations offered a network where youngsters were exposed to the "official" secular moral values of an authoritarian regime: sporting education to build strong bodies to defend the nation, total devoting to the state, and excessive patriotic exaltation. These values would be reappropriated by the succeeded regimes of Diem and Sihanouk at a time where the support of the youth to their regimes was very much needed. Across time, from the 1940s to the 1970s, the state appears as a moral educator which defined moral values as a way to try to maintain its hegemonic power over the different societies of Indochina. Durkheim wrote his work *Moral Education* with the French republican model in mind. Today, we should keep in mind how dangerous it can be to let an authoritarian state outlines secular morality to maintain political stability.

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CANDIDATE TEACHERS' EXPECTETATIONS AND PERCEPTIONS OF UNIVERSITY AND ENGLISH TEACHER TRAINING PROGRAM

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It is critical to determine the expectations and the perceptions of students to increase the quality of an educational institution as these will provide critical contributions to the improvement of the instructional program and the organizational possibilities. In this sense, it is necessary to determine students' expectations and perceptions of the university, program in which they are enrolled, and prospective professions.

This research was designed to define the expectations and the perceptions of students about teacher training program. The goal of this descriptive study is to determine the expectations and §the perceptions of teacher trainees who are students of English Teaching Program in Faculty of Education at Anadolu University. Data was collected using a questionnaire composed of 10 open-ended questions. The questionnaire was given to Freshman (151) and Senior (156) students to determine whether the expectations and the perceptions of students differ based on the year of study. Majority of the students have chosen Anadolu University for the reason that they founded the university as qualified enough. Majority of the students have chosen the program for being English teacher because they like English, because they know the importance of speaking a foreign language and speaking a foreign language is essential. Majority of the students

wanted to be good/successful teachers and depending on this, they expressed that they needed to know about teacher competencies.

Introduction

For an education institute improve its quality, it is necessary to determine the expectations and perceptions of the students who are the most essential part of an education institute. Defining of the expectations and perceptions of students may contribute to improvement of the institutional facilities and program in which they are trained. In this context, in the higher education institutes of which graduates will take in the social life directly as employee and adult individuals, it is necessary to determine the expectations and perceptions of the students about university, programs in which they get education, and profession that they will have in the future.

Taking the fundamentals of the teaching profession into account, a survey was conducted to determine the students' expectations and perceptions of teacher training programs in higher education institutes. The purpose of this survey is to determine the expectations and perceptions of the candidate teachers, who are students now in English Teaching Program in Faculty of Education at Anadolu University, related with the university, program and teaching profession.

For that reason, following questions asked to find the answers:

1. **a.** What are the students' perceptions of university and expectations from it?

    b. Do these perceptions and expectations change form semester to semester?

2. **a.** What are the students' perceptions of programs that they are in and expectorations from it?

   b. Do these perceptions and expectations change form semester to semester?

3. **a.** What are the students' perceptions of teaching profession and expectorations from it?

   b. Do these perceptions and expectations change form semester to semester?

Method

The universe of this survey, which was done in descriptive scanning method, was composed of 690 students of English Teaching Program in Faculty of Education at Anadolu University in 2001-2002 educational year. In order to improve quality of services and programs, first and last grade students asked to express perceptions and expectations. Other students were not asked to express their perceptions and expectations. For that reason, sample of this survey has included 307 students in first and second grades.

Data collecting tool were given to sample group. % 73 of them returned and total 224 data collecting tool had been evaluated and analysed. The population and sample of this survey are shown in Table-1.

Table -1

The Population and Sample of the Survey

	Population of the survey		Sample of the survey	
		Delivered	*Returned*	
			survey	survey
	N	N		N
1. grade	151	151	121	
2. grade	185	--	--	
3. grade	198	--	--	
4. grade	156	156	103	
Total	690	307	224	

10 open-ended questions were included in this survey to get the students' perception of university, programs and teaching profession and expectations from them. Three questions were asked to get students' viewpoints on university and program, and four questions were asked to get students' viewpoints on teaching profession.

Analysing data has been completed in three phases. In first phase, each answer of the questions was analysed by content analysing method and they were categorised. In second phase, answer frequencies were calculated in accordance with the categories defined in the first phase. In third and last phase, frequencies of first and last grade students' answers were compared with categories. (Yıldırım and Simsek, 2000; Tuty et al.1996). Findings are interpreted with hermeneutical method. (Goka et al. 1996). Interpretive approach in qualitative studies emphasises that, phenomenon and values, details and whole, observation and theory cannot be considered separately. (Messer, 1988).

Findings and Interpretation

In analysing and interpretation process of findings of the survey, survey questions are taken up in order. Following is the discussion of these questions.

Students' expectations and perceptions related with the university

For determining the students' expectations and perceptions related with the university, The questions "Why did prefer Anadolu University (AÜ)?", "What are your expectations from the university education?", "What subjects do you want to be informed about A.Ü.?", were asked? When the answers of these questions by the students were looked over, following categories on table-2 were obtained.

Table-2

The reasons why the students preferred A.Ü., their expectations from the university, and their informational need about the university

The Reasons Of Preferring	
Categories	**Subthemes**
Quality of the University	*Quality education, Important, big university, being informed about the university, liking the university*
Atmosphere/physical conditions	Sufficiency of physical conditions, the university provides student loan, a well equipped university, a democratic atmosphere, high level interaction between teachers and students, the university provides a psychology to live in it, a lot of social activities, Eskisehir province is a student city (convenient for students.)
Luck	luck; because of the graduates' high schools are in Eskisehir, his/her hometown is Eskisehir, parents are nearby.
Effect of social environment	Effect of social environment' effect, suggestions by the foreign language teachers in high school, suggestions by the Anadolu University graduates, suggestions by friends, suggestions of family members or relatives, individual preference,

Expectations	
Categories	**Subthemes**
Individual / professionals improvement	Being a good teacher, getting a profession, pursuing for academic carrier, socio-cultural development, getting a social statue, going abroad
University	Students' expectations form university to heighten its social activities, educational quality, technology supported education, teacher-student interaction, library facilities, improve services for students, do interesting educational activities.

Satisfied expectations	----
Unanswered	----

Need for Information

Categories	Subthemes
Opportunities provided for students	Socio-cultural activities, health services, guidance and psychological consultancy services, academic consultancy, students loan opportunities, facilities and opportunities of the university
Academic subjects	Regulations and programs for students, instruction on cadres of academicians, the statue of the university compared to other universities
After graduation	master degree; profession opportunities for graduates, educational opportunities abroad, entrance examination for being a teacher, communication with graduates
Related with profession	Preparing for profession
No information need	----
Unanswered (No Answer)	----

After categorising the answers as they are shown in table-2, frequencies of answers were calculated to compare the answers of first grade with those of last grades. Frequencies related with categories are given in table- 3.

Table- 3

Scattering of students' expectations and perceptions related with the university

Semester	II	VIII
Reason for Preference		
Categories	f	f
Quality of the University	121	61
Atmosphere/physical conditions	58	35
Luck	48	64
Effect of social environments	34	15
Expectation		
Categories		
Individual and professional	118	68
University	73	56

Satisfied expectations	3	10
Unanswered	4	5

Information need

Categories

Opportunities for students	74	49
Academic Subjects	60	26
After graduation	15	38
Related with profession	7	5
No information needed	10	13
Unanswered	20	---

As shown in Table-3, The reason of the preference of the university of all first grade and % 60 of last grade students is that they found the university as qualified. Almost half of first grade and almost one third of last grade students preferred the university because of atmosphere and physical conditions. More than one fourth of the first grade and % 15 of fourth (the last9 grade students expressed that they preferred the university because they affected from their social environment. The rate of the first grade students who expressed that they came this university because of luck is %40, and the last grade students' rate with the same expression is %60.

TQM (Total Quality Management) approach, which was started in 1997-1998 educational year, became familiar to the people and produced quality in the university in the year 2000. This condition may contribute for explaining the different perceptions and expectations between the first and last grade students.

When students' expectations were analysed, almost all of the first grade students and two third of the last grade students have individual and profession related expectations. % 60 percent of the first grade and over half of the last grade students express that they have expectations relate with the services of the university the for students. Just only 10 of the

849

last grade students admit that their expectations have been materialised. Scarcity of the students who says that their expectations have been materialised can be interpreted as the negativity of the university. Studying the reasons of these conditions is essential.

When the subjects, that the students want to be informed form, were analysed, two third of the first grade students and almost half of the fourth grade students need the information related with the opportunities for them. Fourth grade students' need for this information evaluated as striking. This can be commented that the university failed in reflecting its own introduction studies to the students.

Almost half the first grade and one fourth of the last grade students express that they need information in academic subjects. %10of the first grade and one almost %40 of the last grade students need information on post-graduate subjects. When the semesters are taken account these results can be evaluated as quite natural.

Students' expectations and perceptions related with programs

For determining the students' expectations and perceptions related with programs on English teaching, the questions, "Why did you prefer English teaching program?", "What are your expectations form being an English teacher", and "What kind of information do you need related with the program for being an English teacher?", are asked to the students. When the answers of the students were analysed, the categories in table-4 has been gotten.

Table-4

The students' reasons for preferring the program for being an English Teacher and their

expectations related with it and their information need for the program

Reasons of preference

Categories	Subthemes
English	For being keen on English and studying language; advantageous of speaking English language, English language and English teaching profession are popular, learning English more effectively.
Profession	The ideal of being a good teacher, profession guarantee, and profession security, being a teacher is a valid profession.
Personal reasons	Interest and skill, speaking English before hand, desire for continuos self improvement, desire for understanding different cultures, loving people, desire for academic carrier,
Effect of the social environment	The effect of the foreign language teachers at the Secondary Education, Advice of the graduates, Advice of the friends, advice of family members and friends, program quality, luck.

Expectations

Categories	Subthemes
Individual and professional	For being a good teacher, For getting a improvement profession, For academic career, For socio-cultural development, For getting a social statue, For going abroad.
English	For learning English completely, improving English and methodology for learning better.
Profession	Being successful in this field, for being a qualified teacher, appropriate working condition, finding a job
Unsatisfied Expectations	----
Unanswered	----

Information need

Categories	Subthemes
Opportunities and rights for students	Opportunities for education abroad, socio-cultural activities, Academic subjects; opportunities for scholarship.
Life after graduation	Alternative profession opportunities, problems and solutions, assignment conditions; master degree programs, opportunities for working abroad,
Related with program	Innovations/developments in the fields, ELT research results
Learning how to learn	Ways of being successful, ways of reaching to the sources, effective studying methods and techniques.

Having sufficient knowledge	----		
Unanswered	----		

After categorising the answers of the students as shown in table-4, frequencies related with categories are calculated in order to compare the expectations and perception of the first and fourth grade students toward program. Frequencies related with categories are shown in Table-5.

Table 5

Scattering of Students' the expectations and perception related with programs

	Semester	II	VIII
Reason for preference			
Categories		**f**	**f**
English		84	68
Profession		75	60
Personal reasons		61	43
Effect of Social Environment		27	13
Expectation			
Categories			
Program		104	84
English		98	43
Profession		62	46
Satisfied expectations		---	6
Unanswered		8	13
Information Need			
Categories			
Opportunities and rights			
for Students		49	29
Life after graduation		21	22
Related with program		8	10
Having Sufficient Knowledge		4	14
Unanswered		35	17

As shown in Table-5, majority of both first and last grade students expressed their reasons for selecting the program for being English teacher because they like English,

speaking a foreign language is necessary and they believe in its importance. Almost % 60 of both group expressed their reasons because of their desire and ideals for being an English teacher, and because teaching profession is popular etc. half of the first grade and almost half of the fourth grade students expressed their reasons that they had interest in learning English, desire to know different cultures etc, and other personal reasons.

Selection of a profession directed program by the keen and interested people is one of the positive impacts on the quality of the profession. For that reasons, high-level idealism and desire of the students' selection of the English Teaching Program can be interpreted as a positive result of the survey. Almost One fifth of first grade and one tenth of fourth grade students expressed that they had chosen the program because of the advice of their teachers, family members, and friends or from the people who had graduated from the same program. This can be the result of the university's effort to introduce itself effectively.

Students' expectations were classified in three groups as program related, English language related, and profession-related. It is observed that almost % 90 of first grade and almost % 80 of last grade students have expectations related with field/branch classes and class methods. It is very interesting that especially fourth grade students have high level of expectations from the program. However % 5 of the last grade students express that their expectations from the program come true. It will be proper for the university to research the reasons of students' dissatisfaction and develop the program in a way that serves the students satisfaction.

Majority of the students have high-level expectations from English language and from being English teacher. When this is taken account, it can be said that students' dissatisfaction is quite natural. Because, depending on ideals individuals may develop high-level expectations. The fact that almost half of both the first grade and fourth grade students want to be good teacher and be successful in the field and their high level expectations strengthen this theory.

% 81 of the first grade and % 41 of fourth grade students express that they had chosen the program to learn English effectively. This situation is frequently seen in foreign language teacher training programs. The difference between the answers of the first grade and last grade students can be commented as the effectiveness of the classes on profession which was joined in during four-year period.

When students' information need on program analysed, % 41 of the first grade students and % 28 of the fourth grade students expressed that they needed to be informed about the rights and opportunities related with students. %20 of both groups want to be informed on work life after graduation. This question was not answered by one fourth of the subjects. This can be commented that the students' need for being informed is not on high level on this issue.

Students' expectations and perceptions related with teaching profession

In order to determine the students' expectations and perceptions related with teaching profession, the questions "What are your expectations from teaching profession?", "What do you want to be informed about teaching profession?", "Which education institutions do you want to be in the future?" "What kind of information do you have about the

educational institutions?" were asked to the students. When the answers to these questions analysed, following categories were obtained.

Table-6

Students' expectations related with teaching profession, their information need, institutions that they want to have duty in and their information about these institutions.

Expectations on profession

Categories	Subthemes
Teaching profession	Being a successful teacher, Practicing the gained knowledge in the profession, being productive in the profession, meeting the students' need, Furnishing students with new information, Training successful students, Studying with students harmoniously, being loved by the students, sharing the knowledge with people, being a model in the society
Personal Expectations	Material and spiritual satisfaction, self-improvement, academic career, gaining a social statue
Professional environment	Contemporary learning and teaching atmosphere, Harmonious friends, Working in a desired place
Social Expectations	Being beneficial for the society, high level of value of the teaching profession by the society
No expectation	----
Unanswered	----

Information need

Categories	Subthemes
Teacher Competencies	Field and professional knowledge, Teacher experiences; master's degree education, Problem-solving techniques
Regulation	Regulations and law related with the profession, Education system, Working and work opportunities, Possible profession related problems, Abroad education
Unanswered	----

Expected Institutions

Categories	Subthemes
State schools	Primary education; Secondary Education.
Private schools	---
Higher Education	Universities
Unanswered	----

Information Need for Expected Institutions

Categories	Subthemes
Insufficient information	----
No information	----
Sufficient information	----
Unanswered	----

After categorising the answers of the students as shown in table-4, frequencies related with categories are calculated in order to compare the expectations and perception of the first and fourth grade students toward program. Frequencies related with categories are shown in Table-7.

Table 7

Scattering of students' expectations related with teaching profession, their information need, institutions that they want to have duty in and their knowledge about these institutions

Semester	II	VIII
Expectation		
Categories	**f**	**f**
Teaching profession	121	61
Personal expectations	43	78
Professional environment	4	24
Social expectations	10	6
No expectation	7	1
Unanswered	19	9
Information Need		
Categories	*f*	*f*
Teacher competencies	121	47
Regulation	54	43
Unanswered	40	31
Expected Instiution		
Categories	**f**	**f**
State schools	93	103
Private schools	40	31
Higher Education	24	26

Unanswered	12	3

Information need for the institution that is thought as future work-place		
Categories	*f*	*f*
Insufficient information	61	68
No information	29	10
Sufficient information	12	16
Unanswered	19	13

As shown in Table-7, all of the first grade and approximately % 60 of the fourth grade students have expectations for being good/successful teachers. "Material and spiritual satisfaction" is the second expectation by one third of the first grade and three fourth of fourth grade students. Expectations such as "gaining a social statue", and "self-improvement" follow these. "Professional environment" was considered as an important expectation by fourth grade students at the rate of one fourth, but first grade students didn't consider it as important as the fourth grade students did. This is an expected result for the fourth grade students.

When the students' need for information on teaching profession was analysed, parallel results related with teaching profession were obtained. The entire first grade and almost half of the fourth grade students expressed that they need information related with teacher competencies. Information, on regulations and laws related with teaching profession, was needed at rate of % 45 by the first grade and at rate of % 42 by the fourth grade students. Fourth grade students' high level need was found as interesting.

When students' answers related with the institution that they expect to work in the future were analysed, it was seen that % 77 of first grade and the entire of the last grade students preferred state schools. The reason of this is the student's searching for social security and easy profession finding. Private schools preference rate is approximately %

40 by first grade and % 30 by fourth grade students. Higher Education Institutes were preferred by the first grade students at the rate of % 20 and by the fourth grade students at the rate of % 26.

When Students' knowledge related with teaching profession questioned, ıt was observed that majority of the students had insufficient information on it. Approximately one fourth of the first grade and approximately %10 of the last grade students expressed that they didn't have any information about it. Students who expressed that they had sufficient information about teaching profession is % 10 in first grade and % 15in the last grade. It is pleasure that approximately % 60 of first grade and % 81 of last grade students expressed that they have either less or much but have information about teaching profession.

Conclusion

These conclusions were reached in this survey:

- Majority of the students have chosen Anadolu University for the reason that they founded the university as qualified enough. They had expected to gain personal and professional competencies. They needed information about the rights and opportunities that the university provides for them.

- Majority of the students have chosen the program for being English teacher because they like English, because they know the importance of speaking a foreign language and speaking a foreign language is essential. It was observed that they needed

information about the rights and opportunities that the university provides for them and they had expectations related with the classes and the way of classes carried out.

- Majority of the students wanted to be good/successful teachers and depending on this, they expressed that they needed to know about teacher competencies. Furthermore they wanted to work at state schools and they had either less or much information about this issue.

Depending on the results of this survey, Anadolu University has started the studying to improve the institutional opportunities that the university provides for the students and, the educational program.

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TEACHER'S PERSPECTIVE TOWARDS ENHANCING TEACHING PROFESSIONS OF SPECIAL NEEDS CHILDREN IN MALAYSIA.

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Abstract

Special education was started in Malaysia in 1954 by charitable body and depending wholly on public donation. In 1963 a special education was set up in the Ministry of Education and the government complimented the work of the charitable and voluntary body in providing services to the special needs children. Specially trained teachers teach the special needs children. According to Hashim (1998) teaching special needs children are not the same as teaching normal children because most of them are having limited skills compared to the normal children. In order to help these children the teacher must discover and fully utilized their special skills to help and educate them. This research is to explore the teacher's perspective in order to enhance the teaching skills and services to the specials need children. In this study 110 training teachers were involved from Faculty of Education, National University of Malaysia. The finding shows that there are eleven important factors suggested by the teachers in order to enhance the teaching profession of special needs children. 94.5% of the teachers suggested that teachers must be patients, caring and responsible towards special needs children, 89.1 % of the teachers suggested that the teachers must have positive attitude, respect the equal rights and opportunity,

aware of children's welfare and positive attitude towards teaching profession. Finally 60.0% of the teachers suggested that they must have be sensitive to the child' necessity.

Introduction

The special education started in Malaysia in early 1950's. It was first started by missionaries and voluntary organizations as part of social and welfare services to the people. However, in early 1960's the awareness of education to every child in the nation, the ministry of Education took an important step to involve directly in providing education to special needs children throughout the nation. In the beginning the management of special education was only a small unit managed by the School division in Ministry of Education.

However, in 1994 the government set up the Special Education Department and it was recognized one of the six education important division in the Ministry of Education in Malaysia. The Special Education Department plays an important role in providing facilities for educating the special needs children and became one of the six main education division in the Ministry of Education. Since then, the development of special schools and teachers training in teaching special needs children improved tremendously.

According to Gearheart (1972) in Hashim (1998) the special education program is for children who cannot follow or receive any benefit from the normal curriculum in the normal schools. The special education program was developed in order to provide a

suitable facilities and sensible environments that can help the special needs children to acquire academic and daily life skills like the normal children. By acquiring some academic and daily life skills the special needs children will live normally in the society .

Special needs children.

In Malaysia, the special needs children are divided into three main categories. The categories are hearing-impairment, blind and learning disability. The learning disabilities (LD) are those children with mentally retarded, Down syndrome, Autism, and Hyperactive, social and emotional problems. The special needs children are mostly poor in their academic achievement except for the blind.   They are three types of schooling program for the special needs children in Malaysia - Integration, Inclusive and Special School Program.

The integration program is for all the three categories of disabilities. In this program the children sent to the normal schools but they learned in separate classes and taught by special needs teachers. Normally, only one category of disability placed in one particular school. The special needs children in this program will be joining the normal classes only in certain subjects like physical education and art lesson.

In the inclusive program, the special needs children in the normal schools. They are placed in the normal class with the normal children and taught by the normal teacher.

However, the special education teachers are still involved with the children in this program and they are as a resource teacher. The third schooling program is the special school. The special schools program is totally segregated. The children in each school are belonged to one category of disability such as blind or deaf in each school. The school is administrated by special needs teacher and under the supervision of officers from Special Education Department. Only the hearing impaired and the blind children are placed in the special schools program in Malaysia.

Special needs teachers

There are two types of teacher training in Malaysia. The teachers with diploma degree are trained in colleges, meanwhile the teachers with bachelor degree are trained in Universities. The candidates of college trained teachers are those students who had completed the Malaysian Certificate of Education (form five) and Higher School Certificate (form six). They are trained in teachers' colleges for at least two years and obtained diploma in basic teaching. These teachers will teach the normal children in primary and secondary schools. In order to be a special needs teacher, one has to attend another short course in teachers' training college after completing the basic teachers training. The special needs teachers major in one specific disability.

Another group of teachers was trained in Universities. They candidates are students who had completed successfully in Higher School Certificate (form six) and also experienced teachers who had been teaching in schools. The candidates from teaching profession must at

least had been teaching for three years and successfully attending a special short course in particular subject or teaching area from any teachers' college. The candidates who choose to become special needs teacher will major in one category of disability. The duration of teachers training at University level is three years and they will be awarded with Bachelor degree in Teaching. Most of these teachers will serve in secondary special needs schools throughout the nation.

The role of special education teachers

The special needs are different from the normal children. They have limited cognitive, social, physical and interaction skills compared to normal children. These children need special care and attention by the teachers. The special needs children need to be taught by specially trained teachers. According to Tee and Boon (1988) in Haq and Bari (2000) the special needs teachers are teachers who had had a special skill and expertise in teaching. They must be specially trained in order to fulfill the necessity.

Even though, there are small group of special needs children in one class but each child encountered different disabilities from among them. The teacher must know a specific way of handling or teaching a Down syndrome or a dyslexic child. Therefore, the special needs teacher must know various different ways of handling and teaching the special needs children (Englert,Tarrant & Mariage, 1992). Besides, focussing in academic achievements, the teachers responsibility is to help the children to acquire the behavior, social, interaction and daily living skills so that these children will be able to survive or live independently in the society.

The objectives of the study

The objectives of this study are:

- To observe the teacher's attitude and opinions towards enhancing the teaching profession of special needs children.

- To find out what are the characteristics of special needs teachers to enhance the profession.

The research methodology

They were 110 subjects involved in this study. The subjects were experienced teachers of special needs children who continue their study at National University of Malaysia. All subjects were experienced teachers who had been teaching the special needs children. The subjects too, were already undergoing the basic teachers training and attending a short course in teaching special needs children at college level. In this study the subjects were asked to give their suggestions and opinions regarding how to enhance the teaching profession of special needs children. Besides that, interview was also carried out to seek their opinions regarding the teaching attitudes towards teaching the special needs children.

Findings and discussion

The study found out that there are eleven important factors suggested by the teachers how to enhance the teaching profession of special needs children. The results in table 1 shows that 94.5% of the subjects suggested that special needs teachers' must be patients, caring and responsible. The special needs children are those with various problems such as social, emotional, physical and intellectual disabilities (Clark, 1989). The role of special needs teacher is not only on daily academic teaching but all sorts of children's behaviors, emotional and social problems. Therefore, the special needs teacher must have those characteristics to be special needs teacher.

The study also shows that 89.1% of the subjects agreed that special needs teacher must have positive attitude towards children with special need children, respect the equal rights and opportunity of every child, awareness of children's welfare, and positive attitude towards teaching profession. Some of the special needs children are physically, socially or mentally disabled and sometimes these disabilities caused negative perceptions to the public. The special needs children are human being who must be treated equally like others. The special needs teachers must have an attitude of respecting the child's individual right and possessed positive attitude towards the children. Besides that, special needs teachers must be aware of the children's welfare because the children are from various different living standard and economic backgrounds.

Table 1 Teachers perceptions and suggestions

No	Items	/f/	%
1.	Positive attitude towards children with special need	98	89.1%
2.	Vast knowledge about special needs children	69	62.7%
3.	Awareness children's potentials and ability	80	72.7%
4.	Respect the equal rights and opportunity of every child	98	89.1%
5.	Patients, caring and responsible	104	94.5%
6.	Awareness of children's welfare	98	89.1%
7.	Skills in adopting sensible teaching materials	73	66.4%
8.	Skills in using various teaching methods	94	85.5%
9.	Sensitive to the child's necessity	66	60.0%
10.	Awareness of current teaching technology and development	75	68.2%
11.	Positive attitude towards teaching profession	98	89.1%

N=110

The teachers also suggested that vast knowledge about special needs children (62.7%) and awareness of child's potentials and ability (72.7%) are another important factors to enhance the teaching profession. Even though the special needs children are encountering disabilities in many areas but every individual has a special ability or potential that can be developed. Therefore, a teacher must have vast knowledge about the children and awareness towards an individual potential. The teacher must identify and help the children to develop their specific ability. Besides that, teachers involving in special education too, must be skillful in using sensible teaching materials (66.4%) and using various teaching methods (85.5%). This is because the special needs children are those with various disabilities. The used of various teaching materials can create interesting teaching environments and various techniques in teaching will be used for different disabilities of children.

Finally the teachers suggested that special needs teachers must be sensitive to the child's necessity (60.0%). Every special needs child has an ability and individual

differences (Clark, 1989). They might have emotional, social or interaction problems. They might also encountered difficulties in conveying messages or intentions to others. The child will be silent most of the time or aggressive due to problems they encountered. They might be very violence due to environments or people around them. Thus, this will caused problems to the teacher and the other children in the classroom. If a teacher does not understand these problems it is unfair to cane or punish the child. Hence, special needs teachers must be aware and sensitive of a child's necessity and needs most of the time.

Conclusion

In the "Universal Declaration of Human Rights "1948 and in "The World Declaration on Education for All" 1990 at Jomtien Thailand, every nation has agreed that every child should given an opportunity to education regardless their individual differences (Special Education Bulletin, 1997). Therefore, the Ministry of Education Malaysia focuses in providing and upgrading educational program for everyone including the special needs children. The main objective of the government is to provide equal opportunity to children in the nation to receive proper education in schools.

In heading towards a developing nation, the government gave an equal priority to all aspects of life to the people including the welfare of the disable people. Significant steps were taken by the government to improve the services of education for the special needs children and the teaching profession. For example the special education teachers are given an equal treatment as normal teachers for promotion in their teaching profession.

The special education teachers too, are given a special allowance or incentive for joining the profession. In early 1990's more scholarships are being offered to special needs teachers to continue their study at bachelor level in local and foreign universities.

The main aims of the nations are to enhance the teaching profession as a whole, including the special needs teachers. Therefore, everybody must change the negative attitudes towards specials needs children. The special needs children must be treated equally like normal children, sending them to school without acquiring any skills are useless. The roles of the teachers are not only caretaker or baby sitter to special needs children in schools. The teachers are very important elements in schools as an agent of change, delivering and contributing knowledge to children. The special needs children can learn and acquire some skills if they are taught properly by skillful teachers. Hence, the suggestions and opinions can be referred as important factors in order to enhance the teaching profession of special needs children.

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FROM START TO FINISH: LESSONS LEARNED FROM MODERATING "MANAGING NS-NNS TEACHERS" EV ONLINE 2002 SESSION

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"Managing NS-NNS Teachers of English: Maintaining Equality in the Workplace" was one of the six online sessions that was convened under the auspices of TESOL's CALL and EFL Interest Sections. The sessions were offered prior the TESOL Convention (April 9-13, 2002) and ran for two months from January 25 to March 25, 2002. Registration for the online sessions began on the 7th of January until the 24th and was done via email. This paper will discuss how the "Managing NS-NNS Teachers of English: Maintaining Equality in the Workplace" came to be, how it began, how it went and ended. It will also discuss the role of moderators in an online course. The tips that were given to moderators during the training period were proven to be useful and those that I consider of great importance will be stated in this paper. My high expectations were satisfactory met by those who participated actively on a regular basis. But how successful was my session? What did the list say about the session as a whole? And what about those who enlisted but did not say a word during the entire duration of the course? This paper will briefly talk about lurkers and their impact on the group as a whole. I will conclude this paper by offering some suggestions on making online courses and e-groups work, on what to avoid and how to avoid pitfalls. Parting words will be on the relevance of the topic (Managing NS-NNS Teachers) in the ESL/EFL industry and how such online courses can be used to educate teachers and school administrators in uplifting ELT Management standards.

INTRODUCTION

Moderating an online session is a daunting task. One is faced with different hurdles and unexpected outcomes. Self-confidence is a necessary ingredient in becoming an effective group leader. This does not mean that only the well experienced can become good online moderators. You do not have to be computer savvy to be one- but a basic knowledge of some computer applications and how the internet works could certainly help. In this paper, I will share with you the lessons that I have learned in moderating an online session. The narrative style will present, in simple terms, how my session "Managing NS-NNS Teachers of English: Maintaining Equality in the Workplace" came to be. The lessons learned, from start to finish, state what I think are necessary guidelines in becoming effective online moderators. The context is based on a personal account of what I have experienced. The various roles of online moderators are individually significant and challenging. And the lessons given in this paper are expected to be both illuminating and beneficial to present and future online moderators.

HOW THE SESSION "MANAGING NS-NNS TEACHERS OF ENGLISH: MAINTAINING EQUALITY IN THE WORKPLACE" CAME TO BE?
A Call for Proposal from the EV Online Team, as posted on the EFL-IS List

I am a TESOL EFL (English as Foreign Language) IS (Interest Section) list member and I came upon a message that was posted by the (then) IS-Chair, JoAnn Miller.

"You are invited to host an EV Online session. These sessions will serve as a

professional development project and as a virtual extension of the 2002 TESOL

Convention in Salt Lake City. You don't need to be a computer genius to run a session and experts will be available at all stages of the experience to help you make your session a success." JoAnn, Miller, Sat, 20 Oct 2001 00:06:33 -0500

The message also included a list of some of the topics that were presented during the 2001 session and along with Writing and other CALL (Computer Assisted Language Learning) related topics came NS (Native Speaker) Teachers vs. NNS (Non-Native Speaker) Teachers abroad. This automatically caught my attention. The topic NS-NNS Teachers was something that I was interested in; after all, my Master's Dissertation project was very much related to this area. But, moderating an online session? According to Winograd (2001), a moderator of a computer conference wears many hats; with roles varying from lecturer, tutor, facilitator, mentor, assistant, participant, the list goes on (see also Paulsen, 1995). The thought was extremely overwhelming. So, I wrote the Electronic Village (EV) Online team to suggest a topic for one of the sessions, complete with a title, description of the session and target audience. At the bottom of my electronic mail (email), I expressed my interests in joining the session once it gets in full swing but not necessarily moderating it. Christine Bauer-Ramazani, EV Online Team Leader replied and she wrote:

"Thank you very much for your submission of an interesting topic, one that is very sensitive indeed and merits discussion. I would really like to encourage you to moderate this session, which would mean that you post links to articles for the participants to read, ask them to comment, guide the interaction with questions and answers, and provide follow-up, maybe in the form of links to resources. Since this is an issue dear to your heart, who would be more

qualified to discuss it than you and other teachers/administrators in this position?" Mon, 22 Oct 2001 17:37:49 –0400

Moved and convinced, I accepted the position as Moderator, and the "Managing NS-NNS Teachers of English: Maintaining Equality in the Workplace" Session was then formed.

What was 'the Managing NS-NNS Teachers of English: Maintaining Equality in the Workplace' Session about?

The "Managing NS-NNS Teachers of English: Maintaining Equality in the Workplace" was one of the six online sessions offered by the EV Online team under the auspices of TESOL's CALL and EFL Interest Sections. There were no fees involved. And the sessions were presented prior to the TESOL Convention at Salt Lake Utah. The "Managing NS-NNS" session was intended for NS-NNS teachers of English abroad and school administrators (university, college, high school, English kindergarten/language schools) (Yeh, 2002). The session explored the many tensions between native and non-native target language speakers in the workplace, often in the same jobs but with unequal status and pay and examined the many positive and negative aspects of this relationship and their ramifications (Stevens, 2002).

THE ONLINE TRAINING

Lesson 1, Choose a topic that is close to your heart

Although, the selection of topics is the responsibility of the EV Online team, the topic that you will discuss and present during the session is your own personal choice. And you should choose a topic that you know, mentally and by heart. Having researched on the subject area allows you to be confident when presenting both the theoretical and practical issues.

Lesson 2, Prepare to learn

Learning online is another facet of e–moderation (electronic moderation). For first time moderators, the TESOL EV Online team provided an online training months before the online sessions commenced. During the training period, moderators were given tasks to accomplish at specified dates i.e. reading assignments, setting up yahoo groups and downloading software (i.e. yahoo messenger), etc. The training approach was constructivist in nature because it involved a hands-on practice of what was being taught to us.

Getting Started The online training site for moderators of the EV Online 2002 Sessions was made possible using Yahoo groups (http://groups.yahoo.com/group/evonline). The EV Online Yahoo group was an electronic mailing list for the EV Online team and members. An "electronic mailing list", variously referred to as an online forum or a discussion list is a subscription list stored in an email distribution program, to which persons can subscribe using their email address and under conditions set in that particular mailing list's header by the list owner(s). Each time an email post is sent to the list's electronic address, it is distributed to the entire subscription list (Berge and Collins, 2000).

Tasks: Read, Read, and Read. A number of articles were lined up for us to read. Our comments and reactions to the articles were posted to the group. The articles also came in handy because they included some practical suggestions. Issues on netiquette and timely response to questions were discussed in "10-tips to optimize your E-learning" (Tang, 2002), an article in which both the students and moderator would find useful. "Seven Principles of Effective Teaching: A Practical Lens for Evaluating Online Courses" by Graham, et al (2001) was one of the assigned readings. This article takes the perspective of a student enrolled in the course; the authors developed a list of "lessons learned" for online instruction.

ON BECOMING A MODERATOR

What exactly does the word "moderator" mean? Winograd (2001) gives a clear and simple definition, "A moderator is a generalist who is sensitive to the individuals and dynamics that make up the conference and through this sensitivity can decide when a conference is doing well or poorly and deciding on actions to take if a conference is going awry."

Lesson 3, Commitment to responsibilities

The roles and responsibilities of an online moderator could present some onerous and rigorous demands. Quality, in terms of content and delivery, is vital to the success of my session. Since, I did not have co-moderators, there were no one to divide the responsibilities with. Thinking of face-to-face (f2f) conferences and their similarities and differences with online conferences, the idea of inviting guest speakers would not only lighten up my workload but would also add spice to the entire presentation. After

receiving permission to invite guests, the next ordeal was scouting for online guest speakers.

Searching, Inviting and Assigning Online Guest Speakers

"Depth of discussion was provided by the occasional appearance of highly regarded figures who set up websites and led discussions for a week or so." Vance Stevens (2002)

Before heading off in search for the right guest speaker, you should first consider whether you actually need one. In my case, the invitation of guest speakers came as a necessity to look for an authoritative figure that would discuss the specific topics in detail. The speakers invited were respected in their fields of interest. The entire session was divided in eight weeks and the speakers' presentations were to be placed in the beginning, middle and end of the session. With enough patience, I was able to line up three major guest speakers, namely Arthur McKeown (University of Ulster) on "Human Relations Management in English Language Teaching", Charles Mann (University of Surrey) on "Deeply rooted in the society: Is the problem much deeper than we thought?" and Gloria Kismadi (Foundation for Sustainable Development, Indonesia) on "NNS Teachers of English: Aiming to make a difference". As the session itself was delivered in an online format, the guest speaker's participation was also via distance, i.e. in online form.

THE ONLINE SESSION

The "location" of the session was Yahoo Groups and only the text-based version of chat was utilized. Discussions were asynchronous and threaded. From this incoming series of

text messages, participants can internally construct a "discussion" and sometimes, even derive a sense of belonging to a "virtual community" (Rheingold, 1993b in Berge and Collins, 2000).

egistering for the Session From the main page of the EV Online 2002 Sessions, easy-to-follow steps for registration were added into the site. In subscribing or joining a particular session, people were asked to send an email to the moderator. The moderator in return would reply with an invitation to join the session. However, by making some changes in the Yahoogroup's settings, prospective members can simply go to the Managing NS-NNS group and individually register as a member. In whichever form, the moderator has to be virtually present to provide assistance.

Lesson 4, Leave contact email address

It is imperative that the moderator leaves a contact email address in all available sites promoting the session to make sure that all prospective members can successfully register and join the online session in no time.

Lesson 5, Prompt Feedback

A prompt response or feedback is a sign of good practice. There are two types of feedback: information feedback and acknowledgement feedback. Information feedback provides information or evaluation, such as an answer to a question, or an assignment grade and comments. Acknowledgement feedback confirms that some event has occurred, i.e. sending an email acknowledging that he/she has received a question or assignment and will respond soon (Graham, et al. 2001). Another responsibility of the moderator is to help members get online and resolve technical problems with their hardware and software. The moderator has to be swift in responding to calls for help and offer alternative means to unravel the problem/s.

The Welcome Message

"Your welcome note is very informative and will promote your session well." Christine Bauer-Ramazani

Winograd (2001) states that a welcome message written by the moderator is the first thing a student will read when entering an area of the conference. The welcome message sets the intellectual tone of the conference and must be carefully written to present the proper impression. All welcome messages should be warm, friendly and personal, letting the readers know that they are important member of the community, and you, as the moderator are glad they are here.

Lesson 6, Encourage Active Learning

The discussions were based on the course syllabus and the crucial elements of the syllabus are the tasks provided for each of topic. While projects are often an important part of face-to-face courses, students learn valuable skills from presenting their work. The tasks given were in form of questions that require analytical thinking based on the articles provided. The members of the list shared their ideas and discussed their answers asynchronously, while the moderator promptly responded to each posting. In this way, according to Graham, et al (2001) new insights are gathered and students learned from one another as well as from the instructor.

Size of the Group Assuming full participation, a good size for a conference is between 10-15 members. A lower number may not generate enough messages for a conference to seem vital and alive. A higher number can cause the conference to become unwieldy and hard to follow. (Winograd, 2001).

Lesson 7, Encourage the members to participate

"As a group, it is vital that we communicate with each other frequently. You are all encouraged to contribute. Your thoughts, comments, suggestions, etc. are all welcome. The success of this session lies on our group's collective efforts to produce lively and thought-provoking discussions." (Aiden Yeh)

Wingorad (2001) states that in conferences where participation is voluntary, it is common for only about 20% of students to post anything at all. Full participation in a conference

is mandatory to its success and it has been found that a good way to achieve this is to contract for participation, which can be done by establishing either a written or verbal contract between the students and moderator.

Lesson 8, Keep the discussions going

Messages posted on the list played a major part in building up the interaction between the members and moderator. It is the moderator's job to keep the discussions going by questioning various postings, making sure that the topic has been fully covered. For example:

"Lisa - I really like the points you make here, about how teaching organisations often need BOTH NS and NNS staff. Have other folk got different examples from their experience?" Arthur

"Your answers to the two questions below will lead us to our next topic" Aiden Yeh

"The course is off the ground and I am delighted to see some interesting responses to Arthur's questions. I hope that the rest of the members, who still have not said anything, could participate in the discussions." Aiden

We could tell when an online discussion is doing well when members of the list respond to each other's postings with little assistance from the moderator. Haviind, et al (2002) state that the key idea is that participants create their own learning through thoughtful conversations and collaboration.

"A good feeling reading some of the positive responses to my postings--being low person on the totem pole in my new job, after previously being at the top of the heap, I got a big

boost in morale by chatting with like-minded folks from all over the world" Lisa *Harshbarger.*

The online learning community is inherently more fragile. Those who maintain and participate in the community must make a concerted effort to keep it going, especially if the interaction is asynchronous (WestEd, 2002).

Lesson 9, Put in good words to lift spirits

"I looked in and was very happy to see that there is more activity in this site. Excellent! And keep it up! Best wishes". Arthur

"I am pleased that some of you are actively participating in the discussions. And I would like to inform all of you that, so far, our session is on the right track. The discussions have been lively and yes, relevant issues have been raised." Aiden Yeh

Gloria Kismadi in response to Lev Abramov's message *"Love your response! At 5 a.m. in the morning (I am an early riser!) it immediately brought a smile to my face. I tend to agree with you. ."*

Lesson 10, Provide weekly summaries

"We were able to achieve the first week's learning objectives…"

"Some of the topics that will be discussed in later weeks have been briefly mentioned in last week's repartee. We will be thoroughly discussing these issues (i.e. recruitment,

motivation, cultural differences, inferiority complex, society and how it affects Teachers,

students, and parents, and so much more) in later weeks."

Weekly summaries inform members of the list about what has been accomplished and what to expect for the coming weeks. This is also a way of tracking which part of the syllabus you are in and how much farther you have to go.

Winding Up the "Managing NS-NNS Teachers of English" Session Eight weeks came by quickly and it was time to wrap things up. For a short period of time, the moderator and the members learned something from each other. We shared our personal views, we agreed and sometimes debated on some issues, but I think the most important thing of all, was that as a group, we thrived. We were all brought to the session by our passion and interest in the topics that were included in the discussions. What about the lurkers? Well, it is wrong to assume that lurkers do not learn when they do not participate.

"I'm sorry for not taking part in the discussions these last days. I'm still reading the messages, though, so please, keep up the good work! ;-))" Karen

"I wasn't participating much in the discussions for a LONG time, but I did read all the materials and opinions. So, I'd like to thank you all for the most enjoyable and extremely useful and stimulating session. Believe me that brought a lot to me, and I hope to everybody else. A special thanks to all our guest speakers - I just loved your sessions, despite of the fact that I kept silent most of the time, for which I feel so sorry now." G.

However, we should note that being silent is devastating in a way that it influences the attitudes and perceptions of the rest of the members.

Assessing the Session By the end of the session, the EV Online team asked members of the list to answer a questionnaire that would assess the effectiveness and quality of the session. Majority of those who responded enjoyed the repartee and the materials provided. Their assessments on the performance of the moderator are listed below and should also serve as suggestions for future online moderators.

- Kept us track and responded to absolutely every single posting—high level of dedication to having this workshop meet our needs
- Prompt reaction to all messages from the subscribers
- She was with us every step of the way, she explained, clarified and gracious about including everyone
- She answered every participant's questions and comments very rapidly and she made all the efforts to keep the discussion going. She had guest "speakers" to motivate our participation

Advantages and Usefulness of "Managing NS-NNS" Online Session

As to the advantages and usefulness of the online session (in regards to NS-NNS topic) compared to f2f discussions, the members of the list wrote:

- Provided opportunity to make lengthy contributions to the discussions, including some participants who might not normally speak up in f2f context.
- Different papers and articles provided on the topic of discussions

- ■ Much wider national representation

- ■ There was time to go over readings, bring up questions, and most important, the session was very much focused on the subject.

- ■ Many of the points discussed in this session would not have been so frankly discussed in f2f class.

With regards to the discussions and readings that took place, there was one respondent whose answer summarizes it all, and I quote "Online discussions have no real mechanism for enforcing all participants to complete all, even any of the assignments--the trade-off here is that people feel freer to talk about what really interests or concerns them, and as long as the moderator is effective, the experience can still be rewarding." Online Sessions that do not entail any costs to teachers should be encouraged and be available for their perusal. This will provide alternative ways to promote learning, foster professional development and to help NNS become competent teachers of English.

Conclusion

The positive feedback on the 'Managing NS-NNS Teachers of English' Session can be attributed to the high level of activity and participation of the handful of people who gave it their best shot. The active members' invaluable contributions and the moderator's productive efforts are the two most important ingredients needed to make an online session work. One cannot thrive without the other. It is also amazing to know that lurkers learn in spite of their silence. However, we should note that unproductiveness does not profit anyone. Therefore, a contract of participation is a must. The 'Managing

NS-NNS Teachers of English: Maintaining Equality in the Workplace' Session brought up controversial issues concerning NS and NNS teachers. The topics were sensitive in nature and this somehow gave way to the lively discussions and heated debates that took place. The results of the questionnaire reflect the opinions and suggestions, attitudes and perceptions of the list members and would bear a strong impact on future EV Online courses. The lessons given in this paper were the lessons I learned from moderating the 'Managing NS-NNS' Session. These lessons have worked for me, and they still do. And I hope that you could pick one or two that you could apply in your own particular situation. There are no magic dusts that can easily be sprinkled to the problems that you may face in moderating online sessions, but if there is a 'will', there is a 'way'.

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EFFECTIVE MANAGEMENT CONFIGURATIONS IN GENERAL AND VOCATIONAL EDUCATION

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Abstract

In this study we focus on different (configurations of) leadership or management styles in schools for general and vocational education. Using multilevel (students and schools) analyses strong differences in effective management styles between schools with different student populations were observed. The authors present a description of relevant management factors in different contexts.

1. Introduction

Although the context of schooling in various countries can differ greatly, research on school management and leadership can be supportive for improving education in developed as well as in developing countries. Information on the effectiveness of school inputs is important for evidence-based sensible managerial decisions and practices at different levels in the country's education system. At the same time, we have to deal with the issue of universal versus context-specific effectiveness of management practices. There are several indications that some principles of management are applicable

universally, while others are much more sensitive to local and cultural variation. While attention for cultural dimensions of school and management improvement is important, researchers worldwide ecounter numerous similarities to school (and management) effectiveness in different cultures (Hallinger & Kantamara, 2001; Brophy, 2000; Hofman et al, 2000).

Throughout the world, policymakers are seeking to restructure and renew educational systems that have been struggling to keep pace with rapidly changing environmental demands. Social and economic development in the developing nations of Southeast Asia over the past decade is comparable to three generations of change in the industrialised societies of Europe and the United States. While Southeast Asia policymakers have conceived ambitious new educational policies consistent with their evolving social, political and economic aims, the same governments are finding it difficult to implement these policies (Hallinger & Kantamara, 2000). The crucial point here is that educational and managerial choices can also make the difference between good and less effective education. When school management focuses on ineffective practices or the wrong use of basically good policy (e.g. decentralisation of education without sufficient guarantees for quality for all) even rich countries will possibly score low in terms of education effectiveness. It is also a fact that poor countries making the right choices will be able to score high by comparison. An example for this situation can be found in the TIMSS study (1995) where Thailand and Slovenia score at the level of the Netherlands and even higher than the USA on math (eight grade) (Martin, et al, 1996; Hofman, Hofman, Gray & Daly, 2002).

Educational leadership is viewed by many researchers and practitioners as synonymous with school effectiveness (Teddlie & Reynolds, 2000). Strong, especially educationally focused, management is considered to be one of the key characteristics of an effective school. This paper focuses on student learning from a management perspective and examines how the stimulation of an effective educational management climate affects the learning of students. The first underlying assumption in this paper is that school principalship exerts strong influences on the students' social and learning environments.

A second underlying assumption in this paper is that different schools need different management practices. There are strong differences between schools in terms of their student populations, their environment and their place in the community. Some secondary schools suffer from specific problems such as truancy, drop-out, lack of consensus among teachers and management, and conflicts within the school staff (Hofman, Hofman & Guldemond, 2002). Such problems and conflicts could be linked to the contextual characteristics of the school, such as the type of school population, or to influences of community stakeholders surrounding the school.

Research is needed to demonstrate whether one effective management style is the best style for all schools or whether the best management style depends upon certain characteristics of secondary schools. It is likely that management styles are contextually sensitive to differences in student populations and this will also influence the contacts with parents and with the community around the school.

The objective of the study presented here is to clarify how two types of secondary schools, general and vocational education, can be distinguished according to different

principalship or management styles. An empirically-based picture of the types of management that the two types of secondary schools (school principals and heads of faculty) employ will be presented. The basic question is: *Do schools for general and vocational secondary education differ in terms of effective or smart management styles.*

2. Theoretical framework: configuration theory of management

Recent research (e.g. Hofman et. al., 2001) has shown the importance of a multidimensional approach towards school principalship and school management and, as a result, this study proposes a configuration approach that takes into account such a multi-faceted perspective towards the management of secondary schools.

Drawing on findings from organisational and contingency theory (Mintzberg, 1979), we postulate that studying specific types or configurations of secondary schools will be more fruitful than focussing on the influence of single variables on the effectiveness of schools. Moreover, we should take into account the fact that management practices in secondary education are multidimensional and that school principals develop a variety of management styles. Some school principals concentrate on the managerial and administrative aspects of their task, whereas others stress the importance of educationally and instructionally focused principalship. Furthermore, there are schools in which a great deal of the educational decision-making is being transferred to the faculty leaders (so-called 'leadership substitutes') (Firestone, 1996; Sergiovanni, 1992). Consequently, research into the effectiveness of secondary schools should closely examine the relationship between the management practices of the school principal and that of the faculty heads. Only then can the various management practices found in secondary

schools be justified. Research into the social, instructional and monitoring practices of the faculty alongside the work of the school management, could result in powerful lessons concerning the role of management and help us to improve both students' learning processes and the effectiveness of schools.

Central to our configuration theory is the assumption that the effectiveness of schools depends upon how their more formal management characteristics fit in with the specific, more cultural, management elements that seem to produce an integrated and effective school. In line with this view, we wish to point out the relevance of different integration mechanisms that schools may use to develop a consistent and effective school organisation.

3.   Integration mechanisms in secondary schools

Integration is the general term under which unifying arrangements in organisations are subsumed. A broad set of possible integration practices is available to school principals and faculty heads in secondary schools. Mintzberg's original organisational theory (1979, 1983) distinguishes between six coordination mechanisms that are highly suitable as a paradigm of effective school management. Although not all of them apply to the managerial practices of secondary schools, part of these integration mechanisms could in general be a helpful tool to describe and typify secondary schools. By linking these with the outcomes of effective school literature, we can distinguish a set of four integration mechanisms that could be important management tools for principals and faculty heads of secondary schools.

The *first* integration mechanism stimulates a 'mutually adjusted influence structure' in secondary schools. Effective school principals consider it vital to ensure that teachers' views are taken into account and this positively relates to an effective and self-improving school (Leithwood, 1994; Leithwood, Tomlinson & Genge, 1996; Mortimore et al., 1988; Hofman et al., 1999). The study of Bryk and Frank (1991) also reveals that research on school organisation underscores communication within the faculty and highlights the significance of shared decision-making in educational matters. However, not only the teachers and the faculty are important in promoting a policy of 'mutual adjustment' in the school. The influence on the school's policy and the educational processes of various other school members, such as the members of the school board, the parent-teachers association, other parents and students, also seems to contribute to more effective, mutually adjusted, schools. Hofman (1995), as well as Mortimore et al. (1988) found that regular parental involvement in the school life and in school board decision-making is more influential than that of formal parental organisations.

The *second* integration mechanism is called 'educational supervision' and in our case it concerns the educational principalship features of the school head and the faculty leaders. Effective principalship focuses on instructional principalship (both school head and faculty head) and on the stimulatory and motivational supervision of the teachers' instructional process (Hallinger & Heck, 1996; Creemers, 1994). Effective management styles create and promote an achievement-oriented school policy, which is based on the regular monitoring of student progress and the optimal functioning of the teachers in the school.

The *third* mechanism involves 'standardisation through work processes and output' and it concerns the degree to which principals and faculty heads have made arrangements about teaching strategies, learning objectives, learning content, use of homework and tests (Hofman, 1993). It focuses on the standardisation of teachers' behaviour towards students: the extent to which teachers behave according to a set of prescribed school rules concerning truancy and students arriving late, rules on the teachers' testing policy as well as rules set for classroom behaviour. Promoting management practices based on this integration mechanism makes it clear for both the teachers and students as to what the school staff stand for as well as which set of rules and norms students should comply with. This should result in a safe and educationally supportive learning environment that will promote better learning attitudes and higher achievement motivation (Bryk, Lee & Holland, 1993; Teddlie & Reynolds, 2000).

The *fourth* mechanism that secondary schools' principals and faculty leaders can use is referred to as 'standardisation through skills and norms' and this focuses on (site-based) staff development policy and practices used in the school and the department (Hofman & Lugthart, 1991; Mortimore et al., 1988). Effective school managers seem to distinguish themselves from the less effective ones, by demonstrating a strong interest in the professionalisation of their team members as a tool to improve the school as a social and educational entity (Levine & Lezotte, 1990). A smart management style focuses on the binding and motivating factor of continuous professional development in a school, because without such a binding factor schools will be 'loosely coupled' organisations (Weick, 1976; Rosenholtz, 1985). Consequently, this mechanism concentrates on the

monitoring of teachers' skills and the improvement of ('starting') teachers' instructional skills (Teddlie & Reynolds, 2000; Hofman et al., 1999).

In this study we develop a configuration theory of educational management by assessing the degree and extent to which these integration mechanisms are applied by principals and faculty heads in vocational and general education, and use that empirical information to typify the management practices of secondary schools. The following section presents information on the design of the study and the variables it contains. Thereafter, the background and procedures that have led to the construction of different types of secondary school management will be described.

4.   Method

The multilevel model realistically reflects the nested or hierarchical nature of data found in school-effect studies. The analyses were carried out with VARCL (Longford, 1993). We first of all clarified, which part of the total variance was situated at the school level and which part at the student level. By including student input characteristics in the second model and school input characteristics in the third multilevel model (the so-called covariate models), we provided fair effectiveness scores (value added) of schools. Next, four theoretical models were used to estimate the degree to which integration mechanisms at management level contribute to variation in the effectiveness of secondary schools in general and vocational education.

However, it should be noted that we assumed that apart from the independent main effects which seem to point to effective management practices, the variation between the

differences in the schools' effectiveness will be more strongly explained by the interactions of these principal effects. Therefore, we determined the joint effects of composed indicator variables (or configurations of integration mechanisms) on the student outcomes. A multidimensional scaling procedure is employed to create such configurations using our indicators of effective management (i.e. the set of integration mechanisms).

In the next section, we will present the variables and indicators of our study before we discuss how the school configurations are constructed.

5. Data

This study analyses data from two types of secondary schools, vocational and general education, and the performance of their students. Longitudinal data were collected from 121 secondary schools in the framework of a large-scale cohort research 'VOCL'93' (Brandsma, Lugthart & Van der Werf, 1997). Our sample includes 2805 students form 65 secondary schools for general education and 1081 students from 56 schools for vocational education. Students, teachers, parents, faculty leaders and school principals were asked to complete a questionnaire.

Student level: control variables and mathematical performance

This study uses seven student characteristics as covariates. These variables were determined at the beginning of the first year of secondary school (Van der Werf, Lubbers, Kuyper, 1999).

The *first* one is students' school advice [advice] which concerns the score students receive from the primary school head teacher. This is indicative of their level at the beginning of their secondary school career. The *second* one concerns the type of school the student actually attends [school type] and includes four types ranging from 1 = pre-vocational school type, to 2 = (lower) and 3 = (higher) general education to 4 = pre-university education. The third covariate is socio-economic background(s) which includes the educational attainment level of the mother. Furthermore, the ethnic background of the student [ethnicity] is measured as 1 = native and 2 = ethnic minority as well as whether or not the student is raised in a one parent family [1 = parent].

Another student control variable concerns the student's intelligence [psb3] which is measured by a non-verbal sub-test consisting of 40 items, designed to measure students' ability to argue logically (Horn, 1969). The *last* covariate is the students' motivation for achievement [prestmot] and this is measured on a scale of 11 items with a reliability of Cronbach's alpha = 0.77. Some examples of the applied items are: 'I would rather … [not = 1 up to very much = 4] like to be the best of the class' and 'In studying I have … [low = up to very high = 4] certain requirements of myself'. The first three student level control variables are a reflection of the students' intellectual abilities, and the fourth one indicates students' efforts and motivation for achievement.

Mathematical performance was determined by means of a mathematical test at the end of their third school year. Secondary school students were asked to complete a national standardised test, which was developed by CITO (the Dutch national testing service). The test we used had a version for students in general education and one for students in vocational education. The two tests contain a total of 31 and 32 items respectively with a

maximum score of 101 and 77 points respectively. The reliability of both tests is good (Cronbach's alpha is 0.81 and 0.87 respectively).

School level: control variables and integration mechanisms

This study distinguishes three covariates at the school level. In the *first* place the percentage of ethnic minority students [minority %] in the school. Furthermore, we take into account the denomination of the school (public, Catholic, Protestant, neutral or other [sdenom]. The category 'other' indicates the schools with missing scores on this variable. The *last* one concerns the community type of the school which ranges from rural to urban [urban].

This study works from the premise that school management in secondary education is multidimensional and that school principals develop a variety of management styles. It also presumes that there are schools in which part of the managerial tasks, more often the educational decision-making, are being transferred to the faculty leaders. Based on Mintzberg's coordination mechanisms and from the viewpoint of the two managerial levels in secondary schools, we developed a set of indicators for the integration mechanisms. The content of these have been described in section 3 of this paper and in the Appendix the psychometric characteristics of the scales that have been constructed to operationalise them are presented.

6. Configurations of integration mechanisms

A hierarchical type of cluster analysis is employed to find empirically-based configurations based on our (indicators of) integration mechanisms.

The results of the cluster analysis are presented graphically in Figure 1. This shows three empirically based types of school, distinguished by how they make use of the set of integration mechanisms.

Coordination through mutual influence structure

	Cluster 1	Cluster 2	Cluster 3
S influence school principals	0.01	-0.24	0.55
S influence on boards' decisions	-0.01	-0.28	0.73
S contact with parents	-0.03	-0.37	1
F influence faculty	-0.25	0.12	0.78
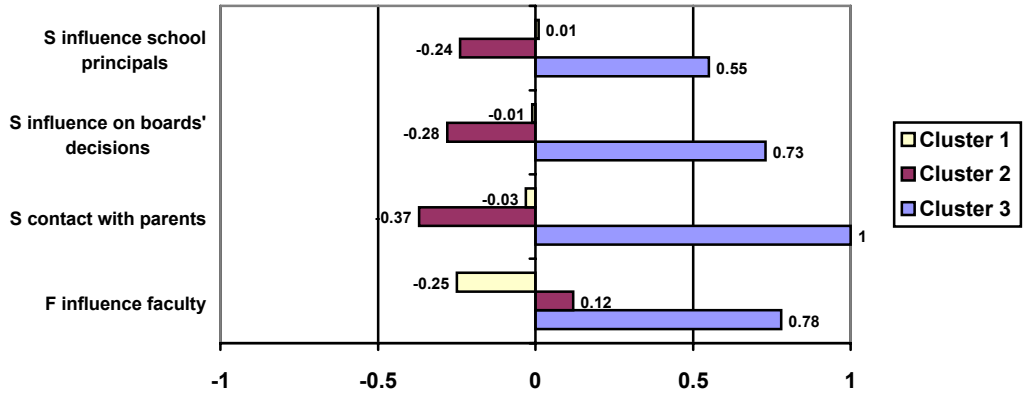
Coordination through educational supervision

	Cluster 1	Cluster 2	Cluster 3
S evaluation policy	0.13	-0.31	0.2
S achievement orientation	0.32	-0.55	-0.02
F emphasis on objectives	-0.05	-0.31	0.96
F instruction arrangements	-0.28	0.32	0.37

Standardisation through work processes and output

	Cluster 1	Cluster 2	Cluster 3
S rules and orderly climate	0.18	-0.59	0.66
S policy cancellation lessons	-0.17	0.02	0.68
F cancellation lessons	-0.22	0.56	-0.45
F arrangements on content, homework	-0.23	-0.03	1
F teachers teamworking	-0.27	0.15	0.78
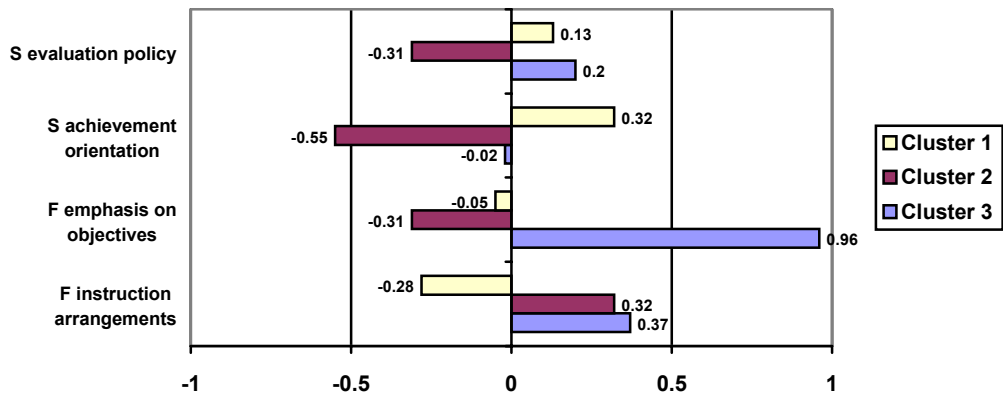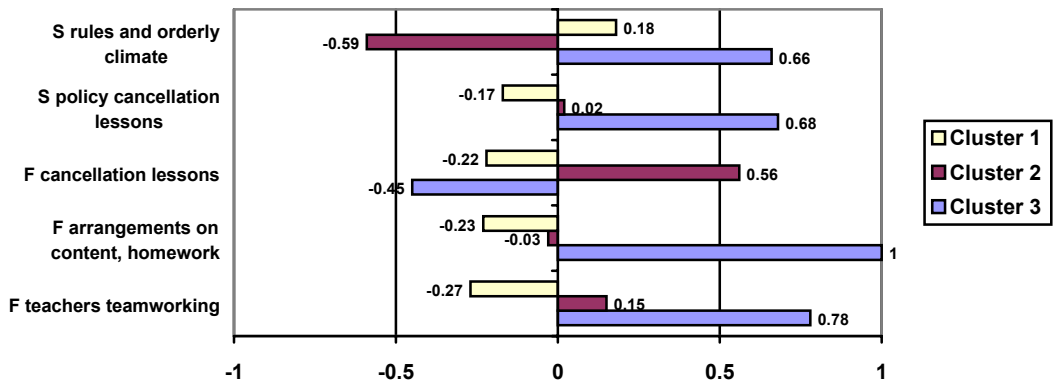
Standardisation through skills and consensus

	Cluster 1	Cluster 2	Cluster 3
S help starting teachers	-0.27	0.14	0.8
S monitor skills	-0.46	0.6	0.47
S consensus	0.28	-0.7	0.52
F consensus	-0.05	-0.22	0.73
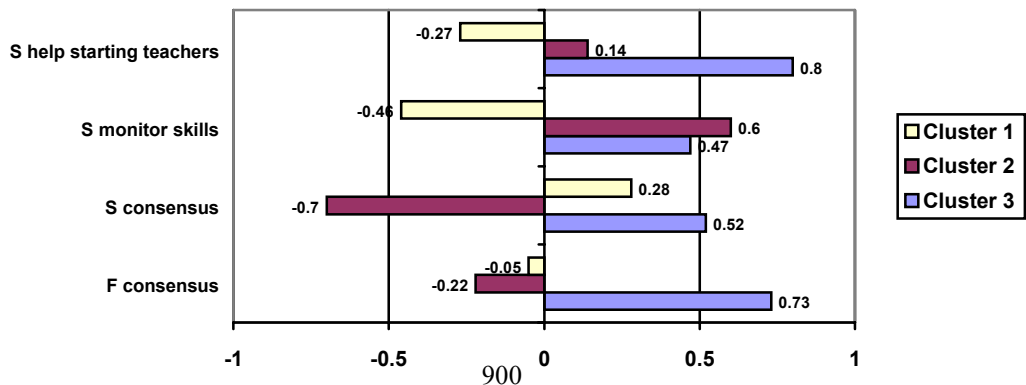
The graphical presentation of the scores for each of the three configurations shows the kind of management types that are seen in secondary schools.

The *first management configuration* (n = 67 schools) includes more than half of the secondary schools in our sample. Inspection of the graphs in Figure 1 shows that this type of management scores modest to low on our four sets of integration mechanisms. In short we can typify this type as *modest school-based management and non-existent faculty management*.

The *second management configuration* (n = 36) includes a third of the secondary schools in our sample. This type of school management exhibits quite a lot of variation in our indicators of integration mechanisms. The graphical presentation shows that this type of school management looks the opposite of the first configuration. In short this type can best described as *faculty-based management focusing on instruction and skills but lacking consensus*.

The *third management configuration* (n =18) is clearly the opposite of both the first and the second type. Schools with this type of management combine strong school-based management with strong faculty-based management. Only 15% of all secondary schools in the sample qualify as this type. In short, it seems appropriate to typify these schools as *strong and integrated school and faculty management.*

The question to be answered is whether these types of school management contribute to the mathematical performance of the students attending these schools. Yet, even more important is the question as to whether our three management configurations relate in the

same way to the mathematical performance of students in general education as they do to those in vocational education. To answer these questions two sets of separate multilevel analyses were conducted: one for vocational and one for general education.

7.   Results of the multilevel analyses

Variance at school and student level

To start with, we again established the size of the potential contribution of the school on the one hand and the student on the other to the mathematical performances. The inter-school variance in mathematical performances of general education students was greater than that for vocational education students, 33% versus 23% respectively. The outcomes of these multilevel analyses are given in Table 1.

- - - - - here table 1 - - - -

Impact of covariates at student and school level

With respect to the influence of the covariates at pupil level we can conclude that general education and vocational education strongly concur: for both school types there are significant effects of advice, non-verbal intelligence and social background on the mathematical performance. Up until now the school covariates do not play a role in vocational education[5]. The only school level covariate that exerts an influence on

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[5] In the case of vocational education, school type has not been included as a variable in the analyses because vocational education is understood to be a type of education at one level.

mathematical performance in general education, even after adjustment for the student level characteristics, is the denomination of schools. Using public schools as our baseline group in the analysis, we observed substantially lower performances within private, but religiously neutral ['bijzonder-neutraal'] schools compared to public ones and private Protestant and Catholic schools for secondary education.

Effectiveness of integration mechanisms in general and vocational education

a) Influence model

With respect to the so-called 'influence model' we noted differences between general education and vocational education (see Table 2). In general education the more effective school management type seems to be the one that allows for a relatively strong influence on the board's financial, educational and managerial policy at the different school layers. The vocational student appears to perform worse in the mathematics test when there is a relatively large influence on the school policy and the educational content by the split sites leader. Furthermore, it seems that in vocational education, there is yet another important school covariate: the types of education offered in a school. With the combination of these two outcomes it seems probable that the vocational pupil performs less well at split sites of broad comprehensive schools.

b) Educational steering

The second content-based model is that of educational steering or supervision by the school management or head of department. It is striking that whereas in general

education no supervisory factors play a role, this is very much the case in vocational education. Both the degree of monitoring of teachers' performance as well as the amount of contact between parents and school were positively correlated with the mathematical performance of vocational education pupils (Table 2). The last observation makes it clear that for vocational education pupils in particular, a good contact between parents and school, and/or the parental involvement in school is beneficial for the performance of their children. It is also noticeable that when an accent is placed at a departmental level on integration between subjects, matching didactic work methods and thematic education, such matters do not benefit the pupil. It is possible that a vocational education pupil will benefit more from a strongly subject-oriented course as opposed to a broader course.

- - - - - -   here table 2 - - - - -

c) Standardisation

Also with respect to our other integration models - which assume that integration in the school is brought about by the standardisation of work processes, output, skills and norms - we observed that various factors affect the performance of vocational education pupils. Positive effects assume the perception of the contribution of the school to pupil performances. There is a positive effect of school managements who place great emphasis on the contribution of the school to the performance of the vocational education pupil. Further, a positive effect has been established for the presence of a professionalisation plan in or for the faculty in vocational education. The negative

correlation between the degree to which innovations are realised and the percentage of teachers participating in professionalisation in association with this, is striking.

In general education we observed, in contrast to vocational education, no influences of the degree of standardisation on the performances. All in all, after concluding the discussion of independent effects, we can establish that there is a clear difference between general and vocational education. Yet the most important question is whether this is also true for the three management configurations.

Smart management configurations in general and vocational education?

In general education, the average mathematical performance is significantly higher in schools characterised by the third management configuration, which included the secondary schools with strong and integrated school and department management. This means that a management style allowing the different layers a relatively strong influence on school policy is more effective. Schools that decentralise power to the faculty and stimulate parental involvement show particularly good results. An effective management style typically shows strong educational supervision from faculty heads. In these schools the rules structure is also adequate, that is, it is clear and carried out consistently. Within departments of the effective management configuration type, a relatively high level of commitment is made with respect to curriculum content and procedures concerning homework, exams, extra instruction time and student feedback. Furthermore, these departments are characterised by activities to enhance professionalism, a lot of teamwork and, finally, strong consensus about the school and faculty policies relating to educational goals, content, didactics, rules and even to financial and personnel management.

Next to this positive effect on student's mathematical performance, an additional, but negative, effect was observed for general education with respect to the second management configuration. This is the management style that includes the secondary schools with faculty-based management focusing on instruction and skills, but lacking consensus.

The hypothesis that configurations of school and department management characteristics are more likely to have an additional effect on mathematical performances than the independent effects or integration mechanisms, is also now confirmed in vocational education. However, unlike in general education, the second management type, in addition to the independent effects, exhibits an additional effect on the mathematical performances. Therefore, the management type of faculty-based management focusing on instruction and skills but lacking consensus, exhibits a positive effect on mathematical performance.

All in all we can conclude that there are some differences between vocational and secondary education students with respect to an effective management context. This also fits in with the outcomes of research at the class level, which also revealed that the nature of an effective teaching environment was very different for vocational and general education students. Clearly the application of class and school management is strongly determined by the type of student (Hofman et al 2000).

The theoretical influence of school level characteristics and the actual influence of the formulated models on the mathematical performances are shown in Table 3.

- - - - - here table 3 - - - - -

Two issues are clearly visible. The first is that the inter-school variance in mathematical performances is greater in general education than in vocational education, 33% versus 23% respectively. In principle, there are therefore more possibilities for the school in general education to exert an influence than is the case for vocational education. We subsequently observed that the models distinguished, put more precisely the indicators distinguished within these, have a diverse impact on the mathematical performances in general and vocational education. For example, the 'influence model' accounts for a quarter of the inter-school variance in vocational education, whereas for general education this model can only account for 3% of the inter-school variance. A comparable situation is found for the standardisation and supervision model. The (additional) influence of the configurations distinguished or the integration mechanisms is more or less the same in general and vocational education.

Put briefly, the explanatory power of the theoretical models is significantly greater in vocational education (70%) than in general education (14%).

9.   Summary and discussion

In this study - to clarify differences in the performance and functioning of students in secondary education - we have concentrated on the role of configurations of integrated management in realising an effective school. Following on from Mintzberg (1997, 1992) we adopted various integration mechanisms for the promotion of effective integrated school management: Integration and (a) a 'mutual adjusted influence structure, (b) educational supervision, (c) standardisation of work processes and output and (d) standardisation by means of skills and norms.

Differential effects in general and vocational education

Both the degree of monitoring of teacher performance as well as the extent to which there is contact between parents and school are positively correlated with the mathematical performances of vocational students. This was not the case for general education students. We also see differences between general education students and vocational education students in another aspect. Vocational students obtain higher marks in mathematics in schools where the school management place great emphasis on the contribution of their school to the performance of the students. High expectations from school, good contacts between parents and school and parental involvement with school, are particularly beneficial for the performance of vocational students. General education students seem to benefit less from such an effective management context. A possible explanation for this could be that performance orientation and parental involvement with school is particularly important for less talented students who more often find themselves in vocational as opposed to general education. General education students are often more talented than vocational education students and therefore find themselves in a company of

students and a learning environment in which they are not further stimulated by these factors that are important for a vocational education pupil.

Furthermore, from other studies it is known that less able students benefit more than able students from a clear and well-structured learning environment. In terms of instruction, the importance of a direct teaching approach for less able students and of a flexible teaching approach for more able students is mentioned. This line of thought could also be true for the role of the teacher in general and vocational schools. In the vocational school with a homogenous group of less talented students, the faculty must then fulfil a heavily regulatory role strongly directed towards instruction in the class and the skills of the teachers in order to be able to teach this type of pupil.

Smart school management?

The question was whether the three configurations of school and departmental management characteristics could bring about additional effects on the cognitive functioning of students. The outcome of the analyses for mathematical performances confirm this thought. In fact we can state that in general education there is a reinforcement premise. The mathematical performances of general education students undergo an extra positive effect from a strong and integrated school and faculty management in this type of school. Furthermore, we established an additional negative effect of the second management cluster in general education: the faculty-based management focussing on skills and instruction but lacking consensus. That this type of management configuration does not function well in general schools can possibly be explained by the fact that too much faculty-based management in this type of school with

three types of general education (lower/higher/pre-university), too often leads to loosely coupled schools. In particular the lack of consensus in the management configuration could be strongly disadvantageous for the mathematical performances of the students.

We conclude that what may be termed an effective management context is partly dependent upon the type of student (general versus vocational). This therefore confirms the validity of the contingency theoretical approach to the social context of learning. Effective management is not "one best style" for all schools. What is the "best style" depends upon certain characteristics of secondary schools. Management styles are contextually sensitive to influences from the community around the school and differences in the student populations, such as students attending vocational schools.

Implications for internationalisation of education

We will close now with some reflections on the implications of our findings about school management and leadership for other countries. The important question that should be answered is "*How universal or context-specific are the results of our study?*" We expect there to be as much similarities as well as differences in the management of schools across cultures. We believe that many of the assumptions that underlie effective management in secondary schools are universal indeed. The multi-factorial or configuration assumption will be valid for many educational contexts. There is no logical reason to assume fundamental differences between different cultural and educational contexts in the fact that combinations of factors will have an impact on school effectiveness in stead of isolated factors. Education is a complex process everywhere. A second issue

concerns that of the context-sensitivity of indicators of effective management practices. We think it is possible to define indicators that are empirically tested robust to context variation. Brophy (2000) provides two arguments for this: first, schooling (or the management of schooling) is much more similar than different across countries and cultures, and, second, the principles of effectiveness refer to generic aspects of schooling that cut across grade levels, school subjects, and particular curriculum content.

Several studies on education management suggest that certain types of leadership are associated with effective schools (Leithwood, 2000, 2001). However, in the setting of many developing countries principals apparently function as the lower link in an organisational chain that extends from the school through local educational boards, district supervisors to central staff. Our study shows a positive impact of school management on school effectiveness if the influence of members of the school community on management decisions is relatively high. This findings indicate that the responsiveness of management to the educational knowledge of staff and other parties involved in the school life, such as parents, is crucial. It would be worthwhile to invest time and effort to make principals, department heads and teachers more aware of the importance of their contribution to decision-making, school policy and the governance of their school. Good relationships between all school parties, like governors, principals, teachers and parents are fundamental to effective decision-making and governance of schools. The specific knowledge of school management and teachers concerning the local community surrounding their school, their pupils' home environment, the students' in- and out-of-school behaviour and peergroup, should be taken more into account in establishing a fitting school policy and effective school-based governing of schools in

general. Although not every country will hold the same opportunities to develop such a local responsiveness of their school management, still, emphasising the opportunities of school-based management could indirectly lead to a more collectively-shared educational and effective school management.

Nonetheless, we have to keep in mind that there are culturally-grounded differences in teachers' responses to certain types of management styles. Just as we found that effective management styles can differ between academic and vocational education, different types of management strategies will be culturally- and context- dependent and needs adaptation to the type of students and teachers within a secondary school. These adaptations should concern adjustments that derive from the cultural values and norms that shape the behaviour of individuals within schools, students as well as teachers. It demands skilful leadership to understand how to take advantage of the cultural strengths within a (local) community..

Finally, we would like to end this article in line with Hallinger and Kantamara (2000) who prefer to view cultural characteristics as *"...two-sided coins on which strengths may become weaknesses and weaknesses may become strengths. When one adopts this perspective, a richer field of vision emerges on the domain of leadership. It should stimulate scholars in the industrialised West to look more deeply at their own conceptual models. If so, they will see – perhaps for the first time -- the cultural background on which their theories exist. This will open up the possibility of richer and more broadly applicable theoretical development".*

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Table 1:　　　Multilevel analyses: general and vocational education effects with math achievement

	1 Baseline model		2 Covariates pupils		3 Covariates school	
	General	Vocational	General	Vocational	General	Vocational
Grand mean	58.3	40.5	-1.6	7.3	4.4	15.7
(2)						
advice			2.3 (0.2)	2.0 (0.2)		
intelligence score			0.6 (0.1)	0.8 (0.1)		
socio-economic status			0.3 (0.1)	1.5 (0.2)		n.s.d.
ethnic minority						
single parent family						
achievement motivation						
school type					8.1 (0.5)	
(3)						
minority %						
public						
catholic						
protestant						
neutral					-15.8 (4.6)	
other						
urban						
range school						-2.3 (1.1)
School variance	128.1	62.6	36.4	56.2	27.6	44.4
Pupil variance	265.6	215.5	192.5	173.0	192.5	173.7
School variance explained			6%	10%	78%	29%

Table 2: **Multilevel analyses: general and vocational education effects with math achievement**

	4 Influence		5 Supervision		6 Standardisation		7 Clusters	
	General	Vocational	General	Vocational	General	Vocational	General	Vocational
Grand mean	24.0	74.3	-26.8	41.6	7.7	132.1		
(4) sinfsplit sinfboard	5.6 (2.4)	-16.1 (5.7)	n.s.d.		n.s.d.	-17.4 (5.7) -7.3 (3.2)	n.s.d.	
(5) scontpar smonitor fintegrate			n.s.e.	6.2 (2.7) 5.8 (1.3) -6.4 (2.5)	n.s.e.	n.s.e.	3.2 (1.2)	5.8 (1.3) -6.4 (2.3)
(6) spolicy scontribu sprofplan sinnovate fprof%					n.s.e.	-8.3 (2.8) 4.2 (1.4) -0.2 (0.1) -12.1 (4.0) 13.6 (6.0)	-8.8 (2.9) -3.7 (1.7) -7.1 (3.0)	
(7) cluster 1 cluster 2 cluster 3							0.0 (0.0) **-9.4 (4.2)** **10.8 (3.8)**	0.0 (0.0) **12.9 (4.0)** 5.9 (4.6)
School variance	24.0	28.3	22.6	14.9	16.2	4.1	10.5	0.7
Pupil variance	192.5	173.9	192.4	173.4	192.4	173.9	192.4	174.9
School expl.	81%	55%	82%	76%	87%	93%	92%	99%

Table 3: Explained school level variance		
	General education	Vocational education
To explain at school level (of total variance)	33%	23%

Explained by:		
Influence model	3%	26%
Supervision	1%	21%
Standardisation	5%	17%
Clusters	5%	6%

A MODEL DEVELOPMENT TO ENHANCE CREATIVE LEADERSHIPS FOR SMALL AND MEDIUM ENTREPRENEUR BY USING THE PRINCIPLES OF ORGANIZING HUMANISTIC ACTIVITIES AND ANTHONY ROBBINS' PERSONAL EMPOWERMENT

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Abstract

The purpose of this research was to develop the model for enhancing the creative leadership for small and medium entrepreneur by using the principles of organizing humanistic activities and Anthony Robbins' self - empowerment. The hypothesis was that the small and medium entrepreneurs participated in self - empowerment training according to Humanist and Anthony Robbins' Concept that their creative leadership would be higher than the pretest and that of the small and medium entrepreneurs did not participate in self - empowerment training. The research methodology was Quasi Experimental Research. The research design was The Pretest - Posttest Control Group Design. The 60 sample subjects were the small and medium entrepreneurs in Udonthani who volunteered to participate in self - empowerment training. The subjects were selected through sampling and matching by using the pretest of score on the creative leadership into two groups that were experimental group and control group, 30 persons for each. The experimental group participated in self - empowerment training according to humanist and Anthony Robbins' concept that had 2 parts. The first one was to participate in the 2 day course for enhancing personal power for SMEs from 8 AM to 5 PM. The second one was to do the exercises according to " 21 day Program to Personal Power " which is the success journal created for SMEs to do activities by themselves and

they had to do the exercise only one chapter each day for 21 days continuously. The instruments used in this research were the creative leadership inventory. The t - test was utilized for the data analysis from the creative leadership inventory.

The obtained results were that the posttest creative leadership of the experimental group was higher than that of the control group significantly at the .01 level.

Introduction

Economic crisis that has happened in Thailand since 1997 has a tremendous impact on Thai people's lives, both economically and socially. Such impact leads to many problems; poverty, income distribution, financial institutions, bankruptcy of enterprises, and unemployment, which is an important problem affecting the national security. Presently, unemployment and lay off crisis is declining.

The research of TRDI found that the unemployment rate of 2001 has a tendency to increase, because of declining economic impact. An unemployment rate of those with diploma is 6.94%, and expected to be 8.38% in 2001, which is increased by 1.44%; that of those with Bachelor's degree and higher is 3.93% in 2000, and expected to be 7.01% in 2001, increased by 3.07%. Moreover, based on the report of Thai Farmers Bank's research center, it is expected that 1.4 million people will be unemployed in 2001, or at the rate of 4.5%, which is increased from the year 2000 of 1.3 million people, or at the rate of 4.3%.

The economic problems in Thailand in the past few years has an economic and social impact on big enterprises. From this point, pubic and private sectors have realized the

importance of Small and Medium Enterprises (SMEs), expecting that SME will help the recovery of the country's economy, since there are altogether 311,518 SMEs in 1998, or 92% of total business in the country. Besides, SMEs have played an important role in workforce employment, which is 4.78 million people, or 62% of total employment.

Although, SMEs in Thailand has been supported by several public and private organizations, most of promotional campaigns for SMEs focuses on the general information that supports on investment, such as information on manufacturing, marketing, finance, and business management. However, based on the research of Dun & Bradstreet, the main reason for failure of 6,600 organizations in the United States is the lack of competence which can be shown as follows:

Major Reasons of SMEs' Failure	Percentage
1. Lack of business experience	11.9
2. Lack of management experience	15.3
3. Business experience not consistent with type of business.	18.1
4. Lack of competence	46.9
5. Disasters	0.6
6. Fraud	0.5
7. Unclear reason	6.7

As a result, The 8[th] National Economic and Social Development Plan of Thailand focuses on the development of human resources' competence, in order to achieve the maximized effectiveness in working and the ability to adapt to the change of social and economical situation. However, it is necessary to understand the attributes of the entrepreneurs for the development of entrepreneur's efficiency. Based on the survey from Bygrave, W.D., ten most desirable attributes of SMEs' entrepreneurs are as follows:

Table 2: The 10 Ds Key Attributes of Entrepreneur

1. Dream   :   Vision and innovation in business development.

2 Decisiveness   :   Courage to make decision.

3. Doers   :   The ability to quickly implement business plan.

4. Determination :   Determination to the target.

5. Dedication   :   Dedication to the business.

6. Devotion   :   Effort to achieve objectives.

7. Details   :   Notice in details affecting the business.

8. Destiny   :   The idea of controlling its own destiny.

9. Dollars   :   Focus on business achievement than money.

10. Distribute   :   Delegation of responsibility, and team orientation.

Therefore, the most ten desirable attributes of SMEs' entrepreneurs are consistent with the idea of creative leadership by Udom Mungkasem as shown below :

1. Proactive   : The ability to lead oneself and others

2. Innovative   : The ability to be creative

3. Participative : The ability to work with others as a team and motivate others to work together

4. Positive   : The ability to turn crisis into opportunity and always think positively

5. Adoptive   : The ability to adapt oneself, and have good business strategy

A researcher has applied Anthony Robbins' principles of personal empowerment, a well-known person as a peak performance consultant and one of the most famous motivational speaker in the world. His idea is widespread in over 70 countries worldwide. The

program "The Personal Power: a 30-day Program For Unlimited Success", developed by him, has created change and success for millions of people worldwide

Therefore, a researcher has foreseen the benefit of applying Anthony Robbins' principles of personal empowerment to organize non - formal education activities, in order to develop Thai SMEs entrepreneurs' creative leadership and enhance their business competency. In organizing activities to enhance personal empower according to Anthony Robbins' idea, a researcher will apply the principles of organizing humanistic activities.

A researcher found that the idea in developing human resource of humanism group is complied with Anthony Robbins' idea in confidence of unlimited power of people. If people have an opportunity to learn from their experience, they will understand what they really want in their lives and, at the same time, are able to motivate themselves to develop to become more and create unlimited success whatever they desire.

However, the model development of creative leadership must be well-planned, so that those activities can help participants to change and achieve targeted behavioural objectives. Therefore, a researcher will apply Tyler's idea to the model development of organizing non – formal education activities for SMEs entrepreneurs. Tyler's principle of the model development for organizing non – formal education activities focuses more on behavioural change of participants, which is consistent with Anthony Robbins' idea of personal empowerment, which emphasizes on human behavior's lasting change.

In conclusion, SMEs effects the recovery and development of the country's economy. All ideas that researches has gained through documents, textbook and other researches show that principles of organizing humanistic activities and Anthony Robbins' personal

empowerment should be the foundation to be applied as a guideline to organize activities to enhance SMEs entrepreneurs' creative leadership.

Objective of Research

To develop the model in order to enhance creative leadership for SMEs entrepreneur by using the principles of organizing humanistic activities and Anthony Robbins' personal empowerment.

Assumption of Research

SMEs entrepreneurs, who have joined the activities organized according to the principles of humanistic activities and Anthony Robbins' of personal empowerment will possess the creative leadership's attributes, which are proactive, innovative, positive participative and adaptive.

Scope of Research

1. Demography :   SMEs entrepreneur in Udonthani
2. Variables
    2.1 Independent variables : The principles of organizing humanistic activities and
        Anthony Robbins' personal empowerment
    2.2 Dependent variables : The creative leadership according to Udom Mungkasem' s
        idea

Expected Benefits

A guideline to enhance SMEs entrepreneurs' personal empower to have creative leadership attributes.

A guideline to study patterns and procedures to organize activities to develop most desirable attributes

A guideline for human resource development to learn Anthony Robbins' idea of personal empower in order to apply such idea to increase efficiency of the personal's development of various organizations.

A guideline to do a research on Anthony Robbins' idea of personal empower.

Conceptual framework

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┌─────────────────────────────┐
│     SMEs entrepreneurs      │
└─────────────────────────────┘
              │
              ▼
┌──────────────────────────────────────────────────┐
│   Tyler's idea of organizing non - formal education│
│   1.  Setting educational objectives               │
│   2.   Selecting learning experience               │
│   3.   Organizing learning experience              │
│   4.   Evaluating the results of learning          │
└──────────────────────────────────────────────────┘
              │
              ▼
┌──────────────────────────────┐
│  Self-confident              │
│  Leadership                  │
│  Positive thinking           │
│                              │
│  Motivation                  │
│  Creative communication      │
└──────────────────────────────┘
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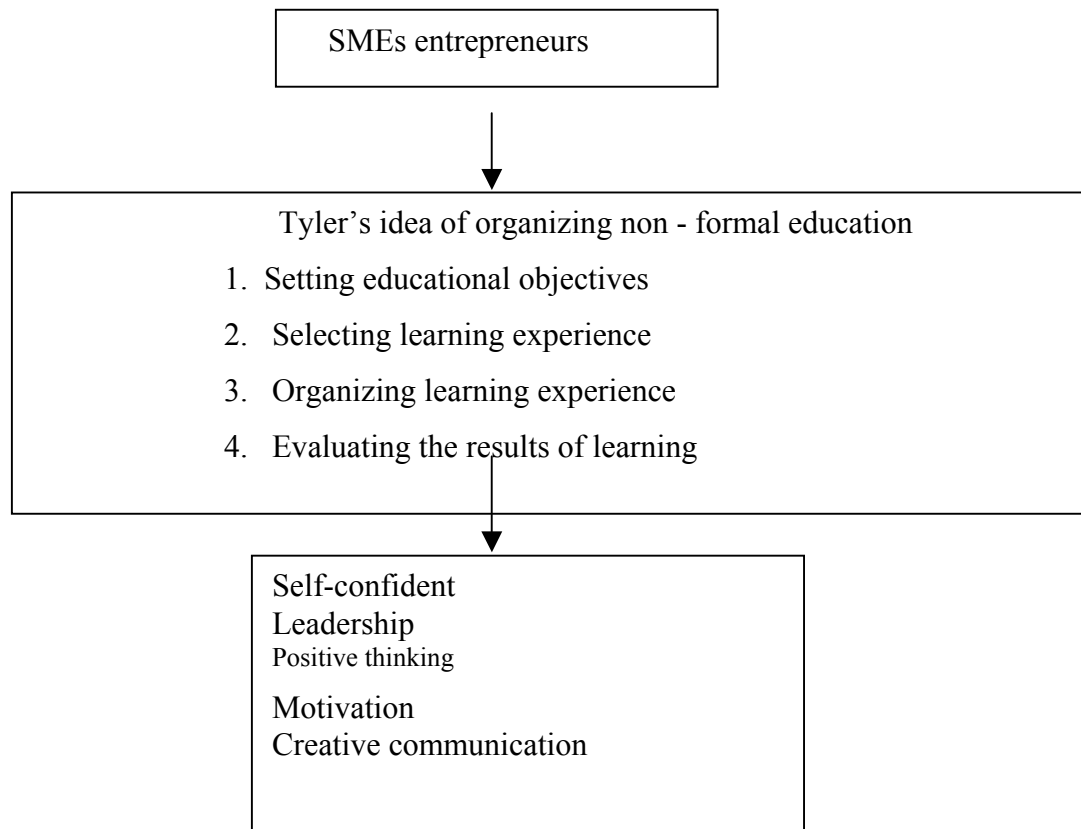
THE IMPACT OF NORMALIZATION ON POLICY AND PROVISION FOR PEOPLE WITH DISABILITIES IN MALAYSIA

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Abstract

The development of normalization in Western countries has embraced a diverse and complex range of services for children with special needs. In Malaysia the concept of normalization has drawn the attention of the country's Department of Social Welfare, Ministry of Education and various non-governmental agencies alike. However such realization is still in infancy and a long way to be translated into effective strategies due to such newness of such concept. Hence progressive efforts should be done in educating the public about the nature of normalization and how they should play their roles in facilitating the process. This paper attempts to discuss the concept of normalization as practiced in Malaysia and how it influences the provision for children with learning disabilities. The data pertaining to the development of normalization and practices of normalization in Malaysia was obtained from some observations and interviews with assistant directors of various departments, school administrators, special teachers and parents. It was found that normalization has a great impact on policy and provision of services. This can be seen with the facilities provided, the growth voluntary organizations and the establishment of education programs. Therefore, from this study it can be said that Malaysia has also embarked few normalization strategies to fulfill the needs of disabled children.

Introduction

We must understand that handicapped children especially those with learning disabilities (LD) are facing tremendous problems in maintaining their affective learning that will interfere their academic achievement in school and life in the future. Perhaps, they can be considered as one of the most vulnerable of the minority and disadvantaged group by the virtue of their limited understanding and ability to communicate, restricted life experience and limited opportunities to participate in decision making. Therefore, those sympathizers within the community such as academicians, parents, social workers, and others felt that all categories of handicapped children need to be taken care in guiding them towards their normal functioning in a society. In realizing this expectation, considerable efforts should be planned. As a matter of fact, the concern about the problems faced by this distinct group had initiated the formulation of normalization services.

The development of normalization in Western countries has embraced a diverse and complex range of services. Farrel (1994) wrote that in early 1980's the practical application of normalization programs in the United Kingdom (UK) look upon the progress in Scandinavia and North America. However, eight years later the focus has moved to a self-significant development in UK and as a result plans have been made to relocate this group of people from staying long in hospitals into community residential settings. He also mentioned about the financial backing from the government to support the process of normalization which brings the benefits not only to children with learning disabilitiea but to the society as well. My visit to Birches School, a special school for children with learning disabilities in Manchester has brought a new dimension of

understanding on the provisions and delivery of normalization services in the UK. Here, the services are run with clear objectives and proper planning and the education programs, family involvement and management are a few salient points that could be reckoned. In Malaysia the concept of normalization has drawn the attention of country's Ministry of National Unity and Community Development and the Ministry of Education in the middle of 1980's (Azmi, 1991). However such realization is still at infancy and a long way to be translated into effective strategies due to the regency of such concept, progressive efforts that has been done in educating the public about the nature of normalization and how they should play their role.

Looking at the above circumstances, first let us uncover the concept of normalization in the perspective of Western philosophies. The Scandinavian concept of normalization as explained by Bank Mikkelsen (1980) is "to create an existence for mentally retarded as close normal living condition". Then , Nirje (1980) redefined it as "making available to all mentally retarded people patterns of life and conditions of everyday living which are as close as possible to the regular circumstances and ways for security". Hence, it can be said that the Scandinavian point of view is to ensure that people with learning disabilities can lead their life as ordinary members of society.

There are differences in the conceptualization viewed by the scholars from North America. The most influential concept of normalization was brought by Wolfensberger (1972) as "the utilization of means which are culturally normative as possible". But some time later the researcher rewrote it in different dimension as the most explicit and highest goal of normalization must be creation, support and defense of valued social roles for people who are at risk of social devaluation (Berg, 1991).

Looking at both conceptualization, Farrel (1994) viewed that the Scandinavian approach emphasized on the right of people with learning disabilities to self-determination and to experience a normal life. The American approach emphasized on the importance of social integration within the society. The accomplishment of implementing the normalization idea in the UK is the combination of these two approaches.

The Development of Normalization in Malaysia

In the last three decades, normalization has been established in many developed countries as a guiding principle in shaping the services for people with severe learning disabilities. Recently the concept was expanded to all over the world including Malaysia. Bergn (1991) who compiled various studies of normalization in Scandinavia, North America, the UK and Australasian concluded that normalization has been proven to be an influential service for the people with learning disabilities. Malaysia has also embarked few normalization strategies mainly adapting the British experience, tailoring to the needs of the local population as can see that most professionals are trained in the UK or specialists from UK are invited to train Malaysian personnels.

Focusing on Malaysia which normally adopts the ideas from the Western countries, it has a lot of things in common which regard to the acceptance of normalization concept. This is more obvious when the adaption is made from the British views where Malaysia is a former colony of Britain. The concept of normalization which has been accepted as an advocation and protection for handicapped people but is interpreted in different ways to suit the Malaysian society. Shamsiah (1998), a Malaysian

social worker wrote in length the definition of normalization but we can put it n simple term that the aim is to allow the handicapped people to receive medical benefit, social acceptable and looked upon in society. Kamarulzaman (1988) in his observation at Taman Sinar Harapan, a boarding rehabilitation center, wrote in length that normalization is viewed to provide education in terms of training and guiding the mentally handicapped children so that it would enable them to adapt themselves in the normal society by utilizing the ability that they had possessed. Isa (1987) a former deputy director of Malaysian Ministry of Education in his seminar paper wrote that "*it is the principle of the Ministry of Educational to provide education for all ……….. special education system in the form of mainstreaming and normalization and to prepare the handicapped children to lead life close to the norms in the society*" (translated, p.12).

There are various agencies or organizations that play an important role in normalization movements in Malaysia. These include government bodies such Department of Social Welfare under the Ministry of National Unity and Community Development, Malaysian Ministry of Education, Ministry of Health and Ministry of Human Resource supported by various non-governmental organizations such as Malaysian CARE, Rotary Club, Selangor Association of Retarded Children, Dignity and Service Association, etc. The Department of Social Welfare which is responsible for handicapped or disabled children's welfare has launched a campaign on the registration of the disabled (Department of Social Welfare, 1994). It is the philosophy of the ministry to provide facilities to this particular group and duly recognizing them as a part of society, . They should be exposed and trained with every facet of activities experienced by non-handicapped people. In principle, rehabilitation is meant to enable them to utilize

their own ability and therefore the education and vocational training are very essential in preparing the disabled in leading a normal life.

The Impact on Policy and Provision of Services

(a) Legislation

Normalization principles have effected changes in the life of disabled people. However in recent years there have been many criticisms from the public and handicapped in Malaysia registering their dissatisfaction on the service provided by the government. In the UK, this vulnerable group can voice up their opinions and criticisms openly where such privileges are rare in Malaysia. Due to this reason the disablede in the UK are being provided with comprehensive facilities such as education, housing, financial support, transport and other essential benefits which are not available in Malaysia. However, the government is taking initial step in improving her service to disabled children. In 1985 Malaysian government has revised the Children and Young People Act 1947 which states clearly the advocation and protection for the children (Kamarulzaman, 1988). In 1996, Malaysian Education Act was amended to fulfill the sufficient needs not only for normal children but also for disabled children to meet the challenges in the new millenium. The Education Act ensures that all disabled children have the right to a free and appropriate public education.

It is uncommon in Malaysia to see the disabled voicing their rights and asking for support and better treatment from the society. Reacting on this problem, a committee was set up in 1985 known as "Malaysian Council For Children Welfare" and the committee

members came from academicians, social workers, professionals and politicians (Department of Social Welfare, 1990). With the powerful from this committee, it plays an important role as *"children ombudsman"* to cooperate closely with the Department of Social Welfare in discussing and planning various aspects pertaining to disabled children. In addition, Malaysian Ministry of Education has improved education for handicapped children reacting from *"The world declaration on Educational for ALL 1990"* and *"The convention on the right of the child"*. Article 23 in the convention states that a disabled child has the right to special care, education and training to help him or her enjoy a full decent life dignity and achieve the greatest degree of self-reliance and social integration possible (Department of Social Welfare, 1989).

(b) Education Service

The historical roots of special education for children with severe learning difficulties in Malaysia had been started by Christian missionary, voluntary organizations and particular individuals in the early 1900s. In 1970's, a systematic attempts were made by the Malaysian government taking into consideration to develop and improve the education service for the disabled children by allocating education in primary and secondary schools. In order to this matter, provision 169 - 173 in Mahathir's Report is a huge contribution to the education of disabled children. On 30[th] June 1981 *Jawatankuasa Antara Kementerian* (Inter-Ministry Committee) was set up and the committee involved the Ministry of Education, Ministry of Social Welfare, Ministry of Health and Ministry of Human Resource (Wan Kalthum, 1991). The committee had made a decision to take and carry out their responsibilities in helping all the disabled people. Ministry of

Education and Ministry of Social Welfare (now Ministry of National Unity and Community Development) have an important role on providing education for disabled people. The recent development had shown new attractive dimension with the allocation of Education Act 1996, integration programs, Department of Special Education and recently the Special Education Service Centre in the Ministry of Education.

Based on the decision of Inter-ministry Committee meeting, Malaysian Ministry of Education is responsible to provide education for:

1.   the visual impairment children

2.   the hearing impairment children

3.   the mild and moderate disabled children

4.   educable mentally retarded children

Meanwhile Department of Social Service, an agency in Ministry of National Unity and Community Development is responsible to provide education for

1. children with severe and profound disabilities

2. children with multiple disabilities

3. disabled children who are unable to receive formal education programs

4. spastic children

Preschool education has become a part of formal education system after the Education Act 1996 had been enacted. A study conducted by Norani (2001) found that 73% of the formal preschool in Malaysia have accepted the disabled children and majority of them are children with learning disabilities. The findings showed that 9% of

the preschool-age children were children with special needs. Today, with majority of children with special needs attend in formal school system, inclusive education has actually taken place naturally in our system

(c)   The Growth of Voluntary Organisation

As idea of normalization began to materialize in Malaysia, academicians, professionals and the public took a some what aloof and distant interest. Kamarulzaman (1988) noted that Department of Social Welfare claimed that nearly all programmes and services have gained success in improving the life of disabled people. On the other hand, Wong (1993) found a lot of complaints voiced by various quarters on scarcity of provisions and services and most disabled people remained neglected. These grievances iniated the establishment of various voluntary bodies to protect of the disabled people in the community. There are many institutions have been established by voluntary bodies known by the names such as Malaysian CARE, Selangor Association of Retarded Children (SARC), BAKIS, TASPUTRA, KIIC, Dignity and Services. Rotary Clubs and others. Furtheremore, there are institutions that seeks for financial support from the Department of Social Welfare. The Department of Social Welfare is a government agency which is responsible to protect the plights and interests of disabled people began to realise their machinery shortcomings. Hence, strategies are initiated to include the involvement of voluntary bodies and non-governmental agencies in synergising efforts of helping the disabled children.

The interest also came from voluntary religious groups culminating with one symposium in Seremban in 1988 to discuss the problems of handicapped children and

ways to overcome such promlems. This meeting was organised by Department of Religious Affairs and Kulliyah (faculty) of Law in International Islamic University of Malaysia. Among resolutions passed in this symposium was to stress on incalculating moral value in the teaching syllabus at the rehabilitation and care institutions. This would equip the children with moral understanding which will help them in adjusting their normal life.

(d)   The establishment of Early Intervention Programs

It is undeniable fact that the implementation of normalization has brought to the consciousness and concern of early education for the handicapped children. This has led to the establishment of Early Intervention Centres in some of the big cities in Malaysia. The first programme was started in 1988 due to the effort of Malaysian CARE, a voluntary organisation. In the West, Hallaham & Kauffman (1994) noted that this programs has been recognised as a successful programs in improving various areas of a child's development such as in speech and communication, social and self-help skills, cognitive and behaviour skills. Arcus (1998) comfirmed that this programs was designed to be an extensive programs not only to provide with learning experiences but to impart skills to the parents as well.

Due to the effort and concern of Malaysian CARE and local public, at present there are 6 Early Intervention Centres in Malaysia catering more than 400 children from different parts of the country. The programs is planned mainly for the 3 and 6 years old children with Down's Syndrome. At the age of 6 they will be graduated and are expected to go on to special class in mainstream schools. The curriculum for the programs are

based on a book 'Curriculum Guide For Teaching Young Mentally Handicapped Children' which is designed by a British psychologist, Robert Deller (Wong, 1994).

(e)   Integrating Children with Learning Disabilities in Mainstream Schools

Throughout the world, it is increasingly recognised that effort should be made to ensure that young children with mental handicaps receive their education in integrating setting (Mittler, 1988). In Malaysia, one of the impact of normalization is the integration of children with learning disabilities in mainstream schools. Before normalization concept was launched, children with learning disabilities were enrolled in a regular classroom with non-handicapped children although it is not a common practice. It only took for a certain period of time before there were sent to Children's Home.

In the early years of 1980's, Malaysian Ministry of Education has directed that every primary school must provide a special class for children with learning disabilities. Pursuant to decision of the Inter-Ministry Committee's meeting, Malaysian Ministry of Education is given responsibility to prepare integration for children with mild and moderate disabilities. Wan Kalthom (1991), mentioned that the first class began in February 1988 in one school in Kuala Lumpur and in 1991 there were 47 special classes in various parts of the country catering for 852 handicapped children. Recently, Inclusive Programs has been promoted to be practiced in all over Malaysia. Inclusive Programs is integration of all student, including those with learning disabilities into regular classes (Shea & Bauer, 1994). However, Isa (1989) stated that sometimes children with multiple and severe disabilities were enrolled in this class as well. Ramli (1991) considered the integration of children with severe disabilities is very important because it will benefit

socially where handicapped and non-handicapped children can share their normal life together. Although, the ministry has admitted the concept of normalization but untill today there are some schools especially in the remote areas which enrolled those with learning disabilities in a class with slow learners in remedial class.

(f)   Health Service

The implementation of normalization in Malaysia has aroused the feeling of sympathy of Ministry of Health towards those disabled people. As we can see in Malaysia, health and medical sevice is available in most part of the country and the treatment for this disabled people is generally good. An agreement was reached in the Inter-Ministry Committee meeting 1981 that the Ministry of Health is given the responsibility of providing early intervention services and diagnose the level of disability so as to be placed in the suitable institutions. Muhamad & Kamarulzaman (1998) noted that the ministry also provides physiotherapy and speech therapy for the disable people at Kuala Lumpur General Hospital, Hospital of Universiti Sains Malaysia, Hospital of National Universiti of Malaysia and Johore Bahru General Hospital. It is noted that therapist from these hospitals are often invited to Early Intervention Centres, Rehabilitation Care Centres and special classes in regular schools. Needless to say, these therapies are to help the teaching staffs to plan effective learning activities for the children in the particular institutions. In addition, counselling and advice services are also available at any hospitals for those suspected pregnant mother who are carrying handicapped or down's syndrome foetus. Early care treatment is also provided for the vulnerable babies.

(g) Day-institutions

Before the introduction of normalization in Malaysia, day-institutions were formerly known as Mental Handicaps Homes. Then in 1986, all the boarding Rehabilitation Care Centers were given a new name *'Taman Sinar Harapan'* (Centre for Bright Future) and *'Pusat Latihan Perindustrian'* (Industrial Training Centre) At present, there are 5 *Taman Sinar Harapan* and 10 *Pusat Latihan Perindustrian* in various parts of the country and all are running under the Department of Social Welfare. In fact, it is part of the institution's principle to prepare them with vocational and training careers. The main objectives of setting this institution are:-

1. to provide basic skills for individuals in preparing them to live in the outside world.

2. to provide social training in adjusting the normal life with other members of the community

3. to provide craft and vocational training for job placement

The disabled of both sexes between the ages of 14 and 25 are admitted at these centers as resident trainees while those between the ages of 26 to 30 are admitted as day – trainees. Counselling career guidance, education, recreational activities, medical care, physiotherapy, occupational therapy and speech therapy are available at the centres.

(h) Community-based Rehabilitation

According to **Abdul Ghani** (1986) in Malaysia, a pioneer project of rehabilitation in community began in 1986 in Kuala Terengganu supported by a specialist from World

Health Organization. At present, we can find this service is available in every state in Malaysia. This service is considered as a new approach which involves parents, families and volunteers with the support of as Department of Social Welfare. The services provided at these institutions is primary education, Malay language, English, career guidance, religious and recreational activities. The children in this institution is comprised of down's syndrome, spastic, autism, hyperactive, mentally retarded and physical impairment deaf children. There are many institutions established nationwide under the names such BAKIS, TASPUTRA, KIIC and others. Rather than these institutions, Department of Social Welfare has also set up institutions for disabled old folk. The institution are *'Rumah Jangkaan Pesakit Melarat'* and *'Desa Bina Diri'*. The objective is to protect the disabled old folk so that they can live in the protected and saved environment. The Institution also provides facilities such as counseling, education, vocation, religious educational and recreational activities.

(i)   Economic Assistance

To help disabled persons to be self-reliant in society, the Department of Social Welfare has provided economic assistance by purchasing items which they manufacture, and various types of activities have been devised to respond to disabled persons' needs in ways that facilitate their participation in society. Allowances for people with special disabilities are provided to help disabled be economically self-reliant. Another form of help to a family with a disabled child is the deduction of income tax. Rather than that, Malaysian government also has reduce the tax for those employer who has employed disabled worker. The fare is for all public transport facilities in the country i.e. bus, train

and plane is reduce by 50% (Jabatan Kebajikan Masyarakat, 2000). In cases where transport is needed i.e. wheelchair or three-wheel motor-cycle or car, the department also provide the facility (a subsidy price) to be purchased. Another form of subsidy by the department is providing support for disabled adult who are in needs of a house. Kuala Lumpur City Hall has given a special price for disabled adult to buy a low cost house and private flat in Kuala Lumpur city (Jabatan Kebajikan Masyarakat, 2000).

Problem with the Implementation of Normalization Services

(a)   Equality

Malaysia is a multicultural country which comprises of three major ethnic group i.e., Malay (58.1%), Chinese (32.1%) and India (8.3%) (Malaysia Kita, 2000). Looking at this phenomena, government agencies and non-governmental organizations are very careful in implementing their programs; trying to avoid or hurting the people's sensitivity. Racial discrimination and unfair treatment should be curtailed. Those responsible parties are aware of the impact of normalization which can be a positive force for the change in the life of the disabled.

(b)   Language

The use of Malay language as a medium of instruction might impede the progress of normalization programs in Malaysia. This is true when the usual language used by the children is their own language for example Cantonese, Hokkien, Tamil, Urdu etc. is totally alien from the Malay language. disabled children and their parents often

experience communication breakdown with school personnels especially those Chinese and Indian parents. This even might discourage, the parent to send their children to rehabilitation care centers or early intervention institutions.

(c)   Cooperation Between Agencies

The relationship between various parties involved in the interest on learning disablities especially those with severely and profoundly disabled are not quite favourable. This matter complicates the process of placing the children with severely and profoundly disabled at regular schools after their period at rehabilitation boarding centres (after 16 years old). Children who had undergone the early intervention programs normally terminate when they have reached the age of 7, after which they may enrol in mainstream school or go back to their families. The enrolment compulsory and if the parents insist on continuing the study of their children at primary and secondary schools, this initiative is done on their own. Government agencies and voluntary bodies are not active in this process and we can notice that great number of drop outs among children with disabilities.

Apart from this, institutions also differ with respect their management and curriculum design. At the Rehabilitation Care Centers, the curriculum was designed by the Department of Social Welfare whilst in voluntary organizations there is no standard of curriculum. It is mainly adopted from a structure designed by a British Psychologist, Robert Deller (Wong, 1994) For classes of Special School, the syllabus was designed by the Curriculum Division of Ministry of Education.

As we can understand here, there are no concerted effort by difference parties in catering the welfare of the children with disabilities in Malaysia. It is necessary for the responsible organizations to coordinate their policies and programs under the of Ministry of National Unity and Community Development or National Council for handicapped. Perhaps with appointment of the new minister of the Ministry with the recent cabinet reshuffle could shed a new light our litter "darlings" of the society.

(d)   Lack of Skilled Personnel

Wong (1993) undertook a study at six early intervention centers in Malaysia and found that most of the teaching staffs in this institutions are without formal training in special education apart from the short period of on-job-training. One teaching faculty reported that there are few participants in the special education course conducted by the Specialist Teacher Training College in Kuala Lumpur (Ibrahim, 1991). To overcome the shortage of special teachers, the Ministry of Education has to employ temporary and contract teachers which is not an effective strategy in the long term. With the spirit of the professionalism and accountability not much could be achieved in helping the children with disabilities. The teaching staffs of Rehabilitation Care Centers mainly consist of social workers and social welfare officers who received limited exposure on special education. Overall we can notice that the number of skilled teachers of severe learning disabilities are very small.

To make matter worse, there are very few professionals and social activists interested in looking at the issues of severe learning disabilities. Academicians also have little interest in conducting studies on normalization programs. Hence, not much

improvements have been made and few recommendations have been suggested by the professional and academicians.

However, the government is trying to remedy short comings. In 1990, Malaysian CARE invited few specialists from the UK to train teaching staffs in early intervention centers in Malaysia (Malaysian CARE, 1990). Specialist Teacher Training College in Kuala Lumpur had been organizing few programs in producing specialist teachers for disabled children since early 1990 (Ibrahim, 1994), The Faculty of Education of the National University of Malaysia has introduced Special Needs Educational course in meeting the needs for professional teachers. Looking at these events, considerable efforts and progress in the implementation of normalization programs had been accomplished by the Malaysian government and voluntary agencies.

Conclusion

The implementation of normalization principles in Malaysia bears a great influence on the policy and provision of the Department of social Welfare. Disabled children and adults have undergone drastic changes in their lives since the provisions of normalization programs were introduced by the department. Of course, the active role played by the voluntary organizations and Ministry of Education has eased some burden on the part of this Department. Nevertheless the achievement is still a long way to match and compare with the service provision in the UK and most European countries.

Any kind of social strategy is not free from problem especially when it involve in various parties at the implementation stage. The normalization principles as suggested by scholar would be much easier to be translated into practical strategies if concerted efforts

are established between all government agencies and voluntary bodies involved in the country's social welfare provision.

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THE RELATIONSHIP BETWEEN DIMENSIONS OF PERSONALITY, SELF CONCEPT AND FAMILY INFLUENCE ON STUDENTS ACHIEVEMENT IN THE FELDA SCHEME

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ABSTRACT:

The purpose of this study is to identify the relationship between the dimensions of personality, self-concept and family influence. The sample consists of 214 students from two secondary schools in the FELDA settlement in Johor. Random cluster sampling was carried out. A pilot test was carried out to determine the internal consistency of the questionnaire. The assessment instrument used in this study was the Malay version of the Junior Eysenck Personality Inventory (JEPI), which has a reliability level of 0.5739. The Malay version of the Tennessee Self-concept Scale, which has a reliability level of 0.8657, was also used. The family influence questionnaire, which has a reliability level of 0.7913, was also used in this study to identify the effects of family influence in the aspects of family cohesiveness, religious and moral aspect and freedom aspect. Descriptive statistic and Pearson's Correlation were used to analyze the relationship between the dimensions of personality, self-concept and family influence. The results show a weak relationship between the dimensions of personality and self-concept, and between the dimensions of personality and family cohesiveness. However, there is no relationship between the dimensions of personality and the religious /moral and freedom aspect. The results also show that there is a strong relationship between self-concept and family cohesiveness and a moderate relationship between self-concept and the

religious/moral aspect. However, there is no relationship between self-concept and freedom.

INTRODUCTION

The progress in the field of Science and technology has stirred a strong desire and passion in the human race to reach the ideal state. However, the values of humanity should also be inculcated along side the development of Science and Technology.

A good and strong education plays an important role in creating a honourable society and moulding the young generation to become useful citizens who could help in the economic, social, cultural and political development of the society.

The country's National Educational Philosophy whose main aim is to humanize man should be given utmost priority in this matter. The NEP is also responsible in producing honorable behavior and a good and stable personality with a strong belief in the almighty God. In Malaysia, this is not a problem as the primary and secondary school curriculum is based on this philosophy.

Every individual is born unique and no one is quite the same as the other. According to Mizan Adilliah et. al. (2000), this difference will cause individuals to have different dimensions of personality and self-concept of themselves. Self-concept is the way an individual perceives himself and his potential to evaluate his strengths and weakness. According to Kamaruddin (1996), personality is how another individual perceives yourself and self-concept is your own perception of yourself.

Self-concept is formed through the social interaction of an individual with his or her environment. As a result of the interaction with significant people, mainly the family members, the personality and self-concept are formed.

In view of this, the relationship between family members is important. The relationship and the role played by family members today differ from what is used to be in the yesteryears. This is due to the development in technology, industrialisation and globalisation.

A family has a strong influence and effect on the development of a child. This is because a child spends more time among family members than he does in a school with friends and teachers. Robiah and Zaiton (1987) agree to the fact that a school can never full take over the responsibility from a family even in a modern society.

According to Halimah and Kamariah (1993), the parents influence the development of the self-concept and personality of their children way before they step into schools. Children who do not have an acclaimed personality are a result of the family that does not fulfill their responsibility. Due to a lack of parental love and supervision, teenagers will retaliate and get involved in social ills such as free sex, co-habiting, smoking, drug abuse, illegal racing, robbing and many more. The social ills have spread so widely that it has become a national problem today.

PROBLEM BACKGROUND

Even though Malaysia is a developing nation, it has still been plagued by serious problems that should be overcome by the authorities as well as by the society. The social

ill of youths has gained a wide media coverage and has caused certain quarters to worry about it, especially the surrounding community.

This problem is serious as there is a tendency for those involved in petty crimes to become criminals in the near future. According to Manja (1990), youth delinquency or youth social ills have become a universal problem faced by nearly every nation today. Malaysia has been plagued by this problem since the past 30 - 40 years. Truancy has become a serious problem nowadays since it has been linked with drug abuse among youths. A local daily newspaper, Utusan Melayu published a report on truancy stating that in 1983, about 25,542 secondary school students have played truant.

This problem is mainly due to the weakness in the role played by the family members. As a result, the self-concept and personality of the children would be adversely affected. A young child is influenced by the interaction of individuals surrounding him or her. As a result of these interactions, a child will form its own attitude, self-concept and dimensions of personality. According to Fulmer (1972), self-concept is dependent on the interactions of an individual with the surroundings. The parents and the family members are the significant people at home.

At the FELDA settlements, parents are busy working in the fields and as a result, their children are left to fend for themselves at home. Because of this, these children are neglected and often retaliate.

To overcome this problem, a stable family institute should be developed. A stable and happy family will eventually produce children who are free of the social ills and who develop and grow in a good, productive and stable environment. It is therefore important for students to identify the type of personality and self-concept and the precise kind of

environment that accounts for it. This could be great help for the society, school and family especially for them to make the necessary changes and adjustments to ensure a successful future and life.

PROBLEM STATEMENT

As Malaysia is a developing nation, all members of the society should contribute to the development of the nation. Youths, who are the country's future leaders, should possess a positive self-concept and an honorable personality.

However, a question that keeps haunting the nation today is how these youths have been trapped in the web of social ills. Of equal importance is the factor or factors that influence the involvement of youths in this matter. The factors, which would be studied, are the influence of the family members in the aspect of family cohesiveness, religious and moral aspect and freedom aspect.

With reference to all factors stated above, how do these factors influence the self-concept and dimensions of personality of youths in the FELDA settlement?

OBJECTIVES OF STUDY

This study is undertaken to achieve the following objectives:

1. To identify the dimensions of personality of students in the FELDA settlement.

2. To identify the self-concept of students in the FELDA settlement.

3. To identify the level of family influence on students in the FELDA settlement

4. To establish if there is a relationship between the dimensions of personality and self-concept.

5. To establish if there is a relationship between the dimensions of personality, self-concept and family influence.

HYPOTHESIS

Many past studies have focused on the relationship between the dimensions of personality and self-concept with academic achievement. However, studies on the relationship between the dimensions of personality and self-concept and family influence have yet to be found.

The null hypothesis is as below:

1. There is no significant relationship between the Extraversion- Neuroticism dimensions of personality and self-concept.

2. There is no significant relationship between the Extraversion- Neuroticism dimensions of personality and family influence.

3. There is no significant relationship between self-concept and family influence.

4. There is no significant relationship between the Extraversion- Neuroticism dimensions of personality and the aspect of family cohesiveness.

5. There is no significant relationship between self-concept and the aspect of family cohesiveness.

6. There is no significant relationship between the Extraversion- Neuroticism dimensions of personality and the religious and moral aspect.

7. There is no significant relationship between the self-concept and the religious and moral aspect.

8. There is no significant relationship between the Extraversion-Neuroticism dimensions of personality and the freedom aspect.

9. There is no significant relationship between self-concept and the freedom aspect.

IMPORTANCE OF STUDY

It is hoped that this research would be beneficial to many parties especially the parents who play an important part in the forming and development of their children's self-concept and dimensions of personality. It is of importance to the parents since they are responsible for creating a conducive family environment. This study would make the parents realize the importance of positive interaction with their children. This would in future encourage parents to increase their interaction with the children and also to improve their parenting skills in educating their children.

This study would also be beneficial to teachers, as it would increase their understanding on the effects of parental involvement in the development of the self-concept and dimensions of personality of their students. It would also serve a guide to counselors in schools to plan a suitable programmed to help their students. This is of importance as the young minds are the ones who would lead the nation in the future.

SCOPE OF STUDY

This study is also restricted to the Form 4 students from two schools in the FELDA settlement in Johor, who have just obtained their Lower Secondary Examination or PMR results. This group of Form 4 students is chosen because they are in the midst of their teenage life. This study does not take into account other outside factors that could

influence the development of dimensions of personality and self-concept such as the socio-economic status and the educational level of the parents.

METHODOLOGY

The research undertaken is a descriptive survey aimed at identifying a relationship between dimensions of personality, self-concept and family influence of Form 4 students from schools in the FELDA settlement in Johor.

Descriptive and inference statistics is used in this research. The descriptive statistics was used to obtain the frequency, percentage and the mean distribution. Inference statistics was used to identify the relationship between the variables. Pearson's Moment Correlation was used to analyze the data to identify the degree of relationship between the dimensions of personality, self-concept and family influence.

POPULATION AND SAMPLE SIZE

The research population from the two schools was 494 students. Determination of the sample size was done according to the table of determination recommended by Krejcie and Morgan (1970). The sample size was calculated as 214. Random cluster sampling was done to obtain the sample of Form 4 students from the secondary schools. The average age of the respondents is 16 years.

INSTRUMENTATION

The instruments used in this study are a questionnaire. The questionnaire includes questions on the respondents' background, personality, self-concept and family influence.

The questionnaire is divided into four parts that is parts A to D. Part A includes questions on the respondents' background, Part B is the Junior Eysenck Personality Inventory whereas, Part C and D is the Tennessee Self-concept Scale and family influence respectively.

PILOT STUDY

A pilot study was carried out to test the reliability and validity of the questionnaire to be used in the research. 10 students were chosen to conduct the pilot study.

The results of the pilot study show that a few questions had to be simplified. These questions were later simplified but by retaining the original meaning. The reliability of Part B, C and D are 0.5739, 0.8657 and 0.7912 each.

DATA ANALYSIS

The collected data was analyzed using the Statistical package for Social Sciences (SPSS) Programmed. Pearson's Product Moment Correlation was used to identify the relationship between the self-concept, dimensions of personality and family influence and to test the hypothesis.

RESULTS

DIMENSIONS OF PERSONALITY

The results obtained were analyzed to see if the dimensions of personality fall into the low or high category in the dimensions of Extraversion, Neuroticism and Lie scale.

Table 1: Distribution of Extraversion

Extraversion	Number	Percentage
Introvert	49	22.9
Extravert	165	77.1
Total	214	100.0

The results show that 49 of the respondents or 22.9 % fall in the dimension of Introvert whereas 165 respondents or 77.1 % fall in the dimension of Extravert.

Table 2: Distribution of Neuroticism

Neuroticism	Number	Percentage
Emotional Stability	120	56.1
Neurotic (Emotional Instability)	94	43.9
Total	214	100.0

The analysis shows more than half of the respondents or 56.1 % are emotionally stable.

Table 3: Distribution of Respondents in the Lie Scale

Lie Scale	Number	Percentage
Low	214	100.0
High	0	0
Total	214	100.0

It is observed that all the 214 respondents or 100 % of the respondents are in the low level of the lie scale. No respondent falls in the high level. This shows that the data from all 214 respondents is accepted.

ANALYSIS OF SELF-CONCEPT
Table 4: The Self-concept level of Respondents.

Self-concept Level	Number	Percentage
Low	0	0
Moderate	180	84.1
High	34	15.9
Total	214	100.0

On the whole, the results show that of the 214 respondents, 180 respondents or 84.1 % have a

moderate self-concept about themselves and 34 respondents or 15.9 % have a high self-concept.

ANALYSIS OF FAMILY INFLUENCE

Table 5: Category of Family Influence

Category of Family Influence	Number	Percentage
Low	0	0
Moderate	145	67.8
High	69	32.2
Total	214	100.0

On the whole, 145 of the respondents or 67.8 % fall in the moderate category of family influence,

whereas 69 respondents or 32.2 % are in the high category.

Table 6: Distribution of Family Cohesiveness Aspect

Category of Family Cohesiveness Aspect	Number	Percentage
Low	5	2.3
Moderate	104	48.6
High	105	49.1
Total	214	100.0

About 104 or 48.6 % of the 214 respondents are in the moderate category. Meanwhile 105 0r 49.1

% of the respondents are in the high category. Only 5 or 2 .3 % falls in the low category.

Table 7: Distribution of the Religious/Moral Aspect.

Category of the Religious and Moral Aspect	Number	Percentage
Low	0	0
Moderate	67	31.3
High	147	68.7
Total	214	100.0

The results show that 67 of the respondents or 31.3 % are in the moderate category of the

religious/moral aspect. 147 or 68.6 % of the respondents fall in the high category and there were no

respondents in the low category.

Table 8: Distribution of the Freedom Aspect

Category of the Freedom Aspect	Number	Percentage
Low	2	.09
Moderate	194	90.7
High	18	8.4
Total	214	100.0

The results show that of the 214 respondents, only 2 respondents or 0.9 % are in the low category. 194 respondents or 90.7 % are in the moderate category whereas 18 respondents or 8.4 % are in the high category.

Testing the First Null Hypothesis: There is no significant relationship between the Extraversion- Neuroticism dimensions of personality and self-concept.

Table 9: Relationship Between the Extraversion- Neuroticism Dimensions of Personality and Self-concept.

Variable Relationship	Correlation value (r)	Level of Significance (p)	Number of Respondents (N)
Extraversion Dimension of Personality and Self-concept	0.341	0.000	214
Neuroticism Dimension of Personality with Self-concept	-0.373	0.000	214

Correlation is significant at the significant level α=0.01 (2 tail)

The correlation value, r obtained is r = 0.341. According to the correlation classification table. The r correlation value obtained shows a weak relationship between Extraversion and self-concept. The significant value, p is 0.000. This p value being less than α (0.01) shows a significant relationship between Extraversion and self-concept at the significant level of 0.01.

In the analysis of the relationship between the Neuroticism dimension of personality and self-concept, the significant level α = 0.01 was chosen. The correlation value, r obtained is - 0.373 and this shows a weak reverse correlation. The significant

value of p = 0.000 is less than the α value of 0.01. This shows a significant relationship between Neuroticism and self-concept.

Testing the Second Null Hypothesis: There is no significant relationship between the Extraversion- Neuroticism dimensions of personality and family influence.

Table 10: Relationship Between the Extraversion- Neuroticism Dimensions of Personality and Family Influence.

Variable Relationship	Correlation value®	Level of Significance p	Number of Respondents(N)
Extraversion Dimension of Personality and Family Influence	0.260	0.000	214
Neuroticism Dimension of Personality and Family Influence	-0.213	0.002	214

Correlation is significant at the significant level α=0.01 (2 tail)

A correlation value of r = 0.260 was obtained to test the relationship between the Extraversion dimension of personality and family influence. This r-value shows a weak or low relationship. The p value of 0.000 is less than the α value (0.01) and this shows a significant relationship between the Extraversion dimension of personality and family influence.

To analyze the relationship between the Neuroticism dimension of personality and family influence, a correlation value r = -0.213 was obtained. This shows a weak and reverse correlation. The significant value p = 0.002 was obtained. This p value is less than α (0.01) and this shows a significant relationship between the Neuroticism dimension of personality and family influence.

Testing the Third Null Hypothesis: There is no significant relationship between self-concept and family influence.

Table 11: Relationship between Self-concept and Family Influence.

Variable Relationship	Correlation value(r)	Level of Significance p	Number of Respondents9N)
Self-concept and Freedom	0.597	0.000	214

Correlation is significant at the significant level α=0.01 (2 tail)

The table above shows the relationship between self-concept and family influence. A correlation value r = 0.597 obtained shows a positive correlation of moderate strength. A significant value of p = 0.000 obtained is less than α (0.01). This shows a significant relationship between self-concept and family influence on the whole.

Testing the Fourth Null Hypothesis: There is no significant relationship between the Extraversion- Neuroticism dimensions of personality and the family cohesiveness aspect.

Table 12: Relationship Between the Extraversion- Neuroticism Dimensions of Personality and the Family Cohesiveness Aspect.

Variable Relationship	Correlation value r	Level of Significance p	Number of Respondents N
Extraversion Dimension of Personality and Family Cohesiveness	0.270	0.000	214
Neuroticism Dimension of Personality and Family Cohesiveness	-0.291	0.000	214

Correlation is significant at the significant level α=0.01 (2 tail)

The table above shows the relationship between the Extraversion- Neuroticism dimensions of personality and the aspect of family cohesiveness. To study the

relationship between the Extraversion dimension of personality and family cohesiveness, a correlation value of 0.270 was obtained. This shows a weak correlation relationship. The p significant value obtained is 0.000. This is less than the α value of 0.01. This shows a significant relationship between the Extraversion dimension of personality and the family cohesiveness.

To study the relationship between the Neuroticism dimension of personality and family cohesiveness and a correlation value of r = -0.291 was obtained. This is a weak and reverse relationship. The significant value obtained, p = 0.000 is less than the significant value. This shows a significant relationship between the Neuroticism dimension of personality and family cohesiveness.

Testing the Fifth Null Hypothesis: There is no significant relationship between self-concept and family cohesiveness.

Table 13: Relationship between Self-concept and Family Cohesiveness.

Variable Relationship	Correlation value r	Level of Significance p	Number of Respondents N
Self-concept and Family Cohesiveness	**0.608**	**0.000**	**214**

Correlation is significant at the significant level α=0.01 (2 tail)

The table above shows the relationship between self-concept and family cohesiveness. A correlation value r = 0.608 shows a positive and strong relationship. The significant value of p = 0.000 is less than α (0.01). This shows a significant relationship between self-concept and family cohesiveness.

Testing the Sixth Null Hypothesis: there is no significant relationship between the Extraversion- Neuroticism dimensions of personality and the religious and moral aspect.

Table 14: The Relationship between the Extraversion- Neuroticism Dimensions of Personality and the Religious and Moral Aspect.

Variable Relationship	Correlation value r	Level of Significance p	Number of Respondents N
Extraversion Dimension of Personality and the Religious and Moral Aspect	0.112	0.102	214
Neuroticism Dimension of Personality and the Religious and Moral Aspect	-0.123	0.072	214

Correlation is significant at the significant level α=0.01 (2 tail)

The table above shows the relationship between the Extraversion- Neuroticism dimensions of personality and the religious and moral aspect. The r-value obtained is r = 0.112. This is very weak relationship. The significant value of p = 0.102 is more than the α value of 0.01. It shows that there is no significant relationship between Extraversion dimension of personality and the religious and moral aspect.

A correlation value of r = -0.123 was obtained to test the relationship the Neuroticism dimension of personality and the religious and moral aspect. This shows a very weak reverse relationship. The significant value obtained was 0.072 and this is more than the α value of 0.01. It shows that there is no significant relationship between the Neuroticism dimension of personality and the religious and moral aspect.

Testing the Seventh Hypothesis: There is no significant relationship between self-concept and the religious and moral aspect.

Table 15: The Relationship between Self-concept and The Religious and Moral Aspect.

Variable Relationship	Correlation value r	Level of Significance p	Number of Respondents N
Self-concept and the Religious and Moral Aspect	0.405	0.000	214

Correlation is significant at the significant level α=0.01 (2 tail)

The table above shows the relationship between self-concept and the religious and moral aspect. The correlation value is r = 0.405 and this shows a moderate relationship. The p value, p = 0.000 is less than the α (0.01) and this shows a significant relationship between self-concept and the religious and moral aspect.

Testing the Eight Hypothesis: There is no significant relationship between the Extraversion- Neuroticism dimensions of personality and the freedom aspect.

Table 16: Relationship Between the Extraversion- Neuroticism Dimensions of Personality and the Freedom Aspect.

Variable Relationship	Correlation value r	Level of Significance p	Number of Respondents N
Extraversion Dimension of Personality and Freedom	0.086	0.211	214
Neuroticism Dimension of Personality and Freedom	0.076	0.268	214

Correlation is significant at the significant level α=0.01 (2 tail)

The table above shows the relationship between the Extraversion- Neuroticism dimensions of personality and the freedom aspect. A correlation value of r = 0.086 was obtained for the relationship between the Extraversion dimension of personality and the freedom aspect. The value shows a very weak correlation. The significant value of p = 0.211 which was obtained is more than α (0.01). This shows that there is no significant relationship between the Extraversion dimensions of personality and the freedom aspect.

To study the relationship between the Neuroticism dimension of personality and the freedom aspect and a correlation value of r = 0.076 was obtained. This value shows a very weak correlation. The significant value obtained which is p = 0.268 is more than the α value of 0.01. It shows that there is no significant relationship between the Neuroticism dimension of personality and the freedom aspect.

Testing the Ninth Hypothesis: There is no significant relationship between self-concept and the freedom aspect.

Table 17: The Relationship between Self-concept and the Freedom Aspect.

Variable Relationship	Correlation value r	Level of Significance p	Number of Respondents N
Self-concept and Freedom	0.053	0.439	214

Correlation is significant at the significant level α=0.01 (2 tail)

To study the relationship between self-concept and the freedom aspect, a correlation value of r = 0.053 was obtained. This value shows a very weak relationship. The significant value of p = 0.439 obtained was more than α (0.01). This shows that there is no significant relationship between self-concept and the freedom aspect.

SUGGESTIONS

Based on the results obtained, the researcher would like to make some suggestions, which could be used as a guide:

1. Parents should realize the importance of family influence on the aspect of family cohesiveness and religious and moral aspect towards the development of their children's personality and self-concept. Parenting styles and child rearing practice are

also important. The values held by their parents and all their actions has an impact on the children's lives.

2. The Parent and Teacher Association should also play an active and proactive role in schools. Parents and teachers in schools should work together to draft or plan activities that could foster ties among parents and their children.

3. Apart from looking into the students' academic achievement, schools should also identify the students' background, dimensions of personality and self-concept. The school management, the students' affairs unit and the counseling unit should play an important part in this effort.

4. Students should be exposed to motivation talks and seminars. They should also undergo leadership training where they could build self-confidence, independence and build their self-esteem.

6. The teachers in schools should realize the importance of involving parents in activities and programmers at the school level. Teachers should be encouraged to discuss about their students' problems with the parents. This would give teachers a better understanding and an insight into their students' lives at home.

Suggestion for Further Research

The researcher would like to make a few suggestions that can be carried out by other researchers in the future. This study was carried out on Form Four students around the age of 15 to 16 years in the FELDA settlements. A similar study can be undertaken by increasing the sample size. The age range of students can also be increased to include the ages of 13 to 18 years.

This is quantitative research. A further study, which combines both the quantitative and qualitative research, can be undertaken. For the qualitative research, observation of the respondents while they are with their family can be carried out.

Researchers on students can also do a similar study from single parent families.

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A COMPARATIVE STUDY OF IRANIAN SCHOLARSHIPS WHO ARE STUDYING IN DIFFERENT COUNTRIES OF THE WORLD IN RELATION TO THEIR ACADEMIC VARIABLES AND MENTAL HEALTH"

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Abstract

Objectives

The main purpose of the study was to compare level of mental health of Iranian PhD. Students who were studying in England, Russia, India, Australia, France, and other countries. Another aim of this study was to examine mental health of students in relation to variables such as university academic language, major field of study, educational system of university, number of presented or published articles, and official language of studying place of students.

Methodology

the study was used descriptive method of the research to measure current level of mental health of participants. The sample of this study consisted of 80 male PhD. Research scholars who were studying in different countries. Distribution of sample based on study place country were: 19, 15, 19, 9, 6, and 12 students for England, Russia, India, Australia, France, and other countries respectively.

The two Instrument employed in the collection of data for this study were Demographic Survey Form and Mental Health Scale which, developed by Kamau, (1992); adapted and translated to Persian language by the investigator. Randomly selected sample members in regularly annual meeting of Iranian PhD. Scholarships in August 2001 completed all

the tools. To analyze and compare the data used descriptive statistics, T-TEST, and One-Way ANOVA.

Findings

findings of this investigation indicate that there exists significant difference between students who were studying in some countries in aspect of overall mental health and some dimensions of that. Furthermore, there exists significant difference between mental health of students in aspects of demographic variables such as university academic language, official language of studying place country of students, major field of study and so on.

INTRODUCTION

The concept of mental health emerged from mental hygiene movement in year 1905. Beers brought a revolution in the medical profession and life with his publication entitled " A mind that found itself ". The World Health Organization (1947) defines health as a state of complete physical, mental, and social well – being, and not merely the absence of disease or infirmity.

Hewitt (1960), opined mental health as a condition of personality which includes active adjustment to meet and overcome problems, a maintenance of inner stability, even when faced with new conditions, and a realistic judgment of the world in which one lives and sees oneself as a part of that world.

A mentally healthy individual is one who is free from anxiety, and disabling symptoms. If he can establish relationships with others, cops well with which life demands then his physical, mental, social, and emotional well-being can be complete (Kamau, 1992).

Taggi (1983) presented a vivid picture of mentally healthy person. The description goes as: A healthy person's response to life is without strain; his ambitions are within the scope of practical realization; he has a shrewd appreciation of his own strength and weakness; he can be helpful, but can also accept aid. He is resilient in failure and level headed in success. He is capable of friendship and of aggressiveness when necessary.

Bowman (1965), included identity strength in the concept of mental health. He suggested that achieving and maintaining mental health, promotion of identity strength and prevention of excessive strain on identity formation are essential.

French (1978) in his model of mental health, four dimensions of mental health from a dynamic system in the sense that a change in any one of them will necessarily produce a change in at least one or other. These dimensions are:

1. Objective person – environment fit.

2. Subjective person – environment fit.

3. Contact of Reality.

4. Accessibly of the self.

According to Kaplan (1971), mental health involves a continuous adaptation to changing circumstances, a dynamic process where a living, reaching being strives to achieve between internal demands and the requirements of a changing environment.

The recent emphasis has been on development of adaptability and compatibility so that the individual is able to maintain internal balance in ever- changing situations and environment. A mentally healthy individual is one who free from anxiety and disabling symptoms. If he can establish relationship with others, cope well with life's demands than his physical, mental, social, and emotional well-being can be said to be complete. Mental health, consist five subscales as follows:

Personal well-being, Anxiety factor, Disabling symptoms, Capacity to establish constructive relationship and Capacity to cope with the ordinary demands and stress of life.

LITERATURE REVIEW

The reviews of related literature make clear that few studies have been conducted about compare of level of mental health of students in the various countries. Wig et al (1969) described university students who sought help from a students counselling centre, whose common problems were difficulty in concentration, frequent sad moods, nervousness, headache, inferiority feelings and poor memory. Apart from these problems, more than students reported personality and adjustment problems a slightly lesser percentage of them presented with anxiety neurosis. Chndrashekhar et al (1980) studied postgraduates and research scholars and reported 16.68% of them under high risk for emotional problems. Researchers also found that low income and students negative attitudes towards the course, correlated with high risk. Such disturbed students were dissatisfied with their home atmosphere, living arrangements, finance, and relationship with teachers. Such students participated in less co- curricular activities than their counterparts.

Hemchand (1983) explored the nature of psychological problems in the sample of 354 male and female college students. The greatest problems were in the areas of self-image, education, and physical health. It was found that 65% of them were emotionally disturbed. Sreenivasan (1994) reported the following problems that were common among the college students: (1). Feelings of inferiority and lack of self-confidence. (2). Inability to cope with the students, poor concentration and memory. (3). Lack of initiative and interest in students. (4). Fear of examination. (5). Irregular attendance and drop – out. (6). Irritability and aggression. (7). Unpleasant and unwanted behavior in and outside the classroom. (8). Abnormal sexual expressions. (9). Tobacco, alcohol and other substance use/abuse. (10). Suicidal ideas and attempts. (11). Frequent medically unexplained health problems.

Seifert (1995), in his study concluded that the relationship of role problems, work trauma, cynicism, social support, and spiritual support to the physical and mental health. Kaur (2000) in his study indicate that after reviewing the related literature of occupational stress, mental health and coping resources following trends emerge:

1). Workload and responsibility is major source of occupational stress.

2). Significant gender differences are present in occupational stress and coping resources,

3). Occupational stress is major cause of low mental health level.

4). Social support has proven to be successful coping resource.

Tong (1994) examined impact of cultural, social, physical, and stress factors on the mental health. He found that mental health status had a differential effect on perceived support from friends and from relatives; and the relationship among religious commitment and mental health was not found to be significant in this study. The effect

of life events on mental health was seen to be mediated through physical health symptoms. Sproul (1994) found that variables of age, employment status, source of employment, social/community integration, work program, subject's contact with their social network, and the degree of help received with problem solving were significantly related to mental health.

OBJECTIVES AND QUESTIONS

The main purpose of this study was to compare mental health level of Iranian research scholars in different countries of the world as well as certain academic variables. In order to determine the significant difference among Iranian research scholars who were studying in different countries in aspects of their mental health, parameters for the study were established by following questions:

1. What exists the significant difference among Iranian research scholars who are studying in different countries of the world (England, Russia, India, Australia, and others) in relation to their mental health?

2. What exists the significant difference among Iranian research scholars who had less than 36 years and those who had more than 36 years old in relation to their mental health?

3. What exists the significant difference among Iranian research scholars who are studying in universities of English language and those who are studying in Non – English language universities in aspect of their mental health?

4. What exists the significant difference among Iranian research scholars who are studying in countries of English language and those who are studying in countries of Non – English language in aspect of their mental health?

5. What exists the significant difference among Iranian research scholars who are studying in Science, Arts, Engineering, and Agriculture in relation to their mental health?

6. What exists the significant difference among Iranian research scholars who are studying under Course – Research educational system and those who are studying under Research educational system only in aspect of their mental health?

7. What exists the significant difference among Iranian research scholars who Presented/published papers and those who did not had Presented/published papers in aspect of their mental health?

METHODOLOGY

Population and sample:

The population of this study consisted of Iranian research scholars who were studying in different countries of the world (England, Russia, India, Australia, and Other in which it is include of France, Canada, Netherlands, and Slovakia). Out of the total population, a sample of 80 randomly selected male research scholars agreed to participate and completed the related questionnaire to test the hypotheses of this study. Virtually 48% of Iranian research scholar in attendance at a regularly annual meeting responded to research instrument. All the selected sample members had married and lived with their family in the study place country about one or two year and their mother tongue was

Persian. The distributions of the selected sample according to their   Age, Study place country Academic language of the university, Official language of study place country, Presented/Published articles, Field of study, and Educational system of university are given in tables 1 to 7.

The Instrument:

The two instruments was used in the collection of data for this investigation were the Mental Health Scale (MHS) and a Demographic survey Form. All were completed by selected research scholars in regularly annual meeting in Iran in the year of 2001.

The mental health scale was developed by Kamau (1992) and adapted and translate to Persian language by the investigator to determine the mental health level of Iranian research scholars.

The instrument contained five subscales (Personal well-being, Anxiety factor, Disabling symptoms, Capacity to establish constructive relationship and Capacity to cope with the ordinary demands and stress of life). As well as fifty simple questions that participants were required to respond to each item in terms of ' Yes' or 'No'. Each item is scored on a scale from 1 to 0. Certain items are scored negatively, the scoring is reversed. The possible range of score for scale is zero to fifty.

The instrument has a high reliability coefficient. Reliability for MHS was determined by the test – retest method, the estimated reliability coefficients using this method, was found .83 for Mental Health Scale scores. For determine concurrent validity the scores of the Mental Health Scale were compared with the PGI Health Questionnaire N-2 developed by wig and verma (1978). The results validate the MHS and warrant its safe

application as a measure of mental health. Further content validity was also found to range among '0.20 to 0.60' for all the items, thus indicating satisfaction with the validation, (Kamau and Gupta, 1995).

Data collection and Analysis:

Collection of data was done in early 2001 in regularly annual meeting of Iranian scholarship in Iran. Before administering the questionnaire, the investigator officially sought the permission from authoritarian positions. Moreover, than personality distributed the related questionnaires among selected sample members. Proper instructions were given to research scholars and if any doubts or questions were raised, they were convincingly answered.

After gathering all of questionnaires, incomplete questionnaires were dropped from the study. The final complete questionnaires were 80. The version 10 of statistical package for the social science (SPSS) computer software package was used for analyzing of the data by investigator personality.

Descriptive statistics were used for analysis of the demographic characteristics of participants and frequency of items. One-way analysis of variance was used to assess differences among research scholar in aspects of study place country, major field of study, and number of presented/published papers in relation to their mental health. To determine significant differences among research scholars in variables of age, official language of study place country, academic language of study Place University, and educational system of university of research scholars in relation to their mental health, T - Test was used.

FINDINGS

The data analyzed relative to the MHS and demographic variables to test of the each hypotheses. The results are given as follows:

Table 1: distribution of scores means of research scholars in respect of their study place country, overall mental health and subscales of mental health ViZ, Personal well-being (PW), Anxiety factor (AF), Disabling symptoms (DS), Capacity to establish constructive relationship (CER) and Capacity to cope with the ordinary demands and stress of life (CCS).

Independent variable	Frequency	OMH	PW	AF	DS	CER	CCS
England	19	34.78	11.52	5.52	5.24	6.15	6.21
Russia	15	34.26	11.60	5.06	5.00	6.13	6.06
India	19	41.94	14.10	5.47	6.21	7.84	7.10
Australia	9	32.77	10.77	6.22	3.88	6.22	5.55
Other Countries	18	33.94	11.27	5.11	4.66	6.55	6.05

A significant difference was found among research scholars who were studying in India and those were studying in England, Russia, Australia, and other countries in aspect of overall mental health (OMH), (F=5.813, P<0.01). In addition, there was no difference significance among other groups in relation to overall mental health.

There was found significant differences among research scholars who were studying in India and those who were studying in Australia and Others in respects of personal well-being (PW), (F=3.42, P<0.05); Disability symptoms of mental health (DS), (F=5.306,P<0.05) and Capacity to cope with the ordinary demands and stress of life's (CCS), (F=3.388,P<0.05) dimensions of mental health. No observed significant

differences among other groups of research scholars in aspects of personal well being (PW), Disability symptoms, (DS) and Capacity to cope with the ordinary demands and stress of life (CCS) dimensions of mental health.

There were no significant differences among whole groups of research scholars in respect of dimension of (AF) anxiety factors of mental health.

A significant difference was found among research scholars who were studying in India and those who were studying in England and Russia in respect of dimension of Capacity to establish constructive relationship (CER) of mental health (F=3.21, P<0.05). In addition, there were no significantly differences among other groups in respect of dimension of Capacity to establish constructive relationship (CER).

Table 2: distribution of score means of research scholars in respect of their Age, Overall mental Health and Personal well-being, Anxiety factor, Disabling symptoms, Capacity to establish constructive relationship and Capacity to cope with the ordinary demands and stress of life subscales.

Independent variable	Frequency	OMH	PW	AF	DS	CER	CCS
Age 35 year and less	37	35.03	12.02	5.64	4.89	6.75	6.21
Age 36 year and more	43	36.70	12.00	5.65	5.44	6.55	6.34

T–test results revealed that there was no significant difference among variables of age of research scholars and their overall mental health scores (t= .257, P > 0.05). Further, there was no significant difference between two age groups of research scholars in respect of whole subscales of mental health. T-test results were (t=. 039, P>0.05; t=. 006,P>0.05; t=1.605, P>0.05; t=. 729, P>0.05; and t=. 465,P>0.05) for

subscales of Personal well-being, Anxiety factor, Disabling symptoms, Capacity to establish constructive relationship and Capacity to cope with the ordinary demands and stress of life respectively.

Table 3: distribution of scores means of research scholars in respects of their Academic Language of study place University, overall mental health and subscales of mental health ViZ, Personal well-being (PW), Anxiety factor (AF), Disabling symptoms (DS), Capacity to establish constructive relationship (CER) and Capacity to cope with the ordinary demands and stress of life (CCS).

Independent Var	Freq	OMH	PW	AF	DS	CER	CCS
English	**57**	**37.03**	**12.33**	**5.98**	**5.29**	**6.87**	**6.43**
Non- English	**23**	**33**	**11.21**	**4.82**	**4.91**	**6.08**	**5.91**

Significant differences were found among variables of various academic language of study Place University of research scholars and their overall mental health scores (T= 2.185, P<0.05) and Anxiety factor (AF) dimension of mental health (T=2.77, P<0.05). Further, there were no significant differences among academic language of study place university of research scholars in respect of dimensions of Personal well-being (PW) (T=1.49, P>0.05); Disabling symptoms (DS) (T=1.01, P>0.05); Capacity to establish constructive relationship (CER) (T=1.80, P>0.05); and Capacity to cope with the ordinary demands and stress of life (CCS) (T=1.70, P>0.05).

Table 4: distribution of scores means of research scholars in respects of their Educational System of study place University, overall mental health and subscales of mental health ViZ, Personal well-being (PW), Anxiety factor (AF), Disabling symptoms (DS),

Capacity to establish constructive relationship (CER) and Capacity to cope with the ordinary demands and stress of life (CCS).

Independent Var	Freq	OMH	PW	AF	DS	CER	CCS
Course - Research	31	35.16	11.64	5.34	4.96	6.64	6.22
Research	49	36.48	12.24	5.83	5.32	6.65	6.32

There was no significant difference among variables of educational system of study Place University of research scholars and their overall mental health scores (T=. 826, P>0.05). In addition, there were no significant differences among educational system of study place university of research scholars in respect of mental health dimensions of Personal well-being (PW) (T=. 854, P>0.05); Anxiety factors (AF)(T=1.19,P>0.05); Disabling symptoms (DS) (T=1.01,P>0.05); Capacity to establish constructive relationship (CER) (T=. 019, P>0.05); and Capacity to cope with the ordinary demands and stress of life (CCS) (T=. 345, P>0.05).

Table 5: distribution of score means of research scholars in respects of their Official Language of study place Country, overall mental health and subscales of mental health ViZ, Personal well-being (PW), Anxiety factor (AF), Disabling symptoms (DS), Capacity to establish constructive relationship (CER) and Capacity to cope with the ordinary demands and stress of life (CCS).

Independent Var	Freq	OMH	PW	AF	DS	CER	CCS
English	50	37.50	12.38	6.12	5.40	7.02	6.50
Non- English	30	33.43	11.40	4.86	4.83	6.03	5.93

A significant difference was found among variables of official language of study place country of research scholars and their overall mental health scores (T=2.609, P<0.05), dimensions of Anxiety factor (AF) (T=3.27, P<0.05); and Capacity to establish constructive relationship (CER) (T=2.44, P<0.05). Furthermore, there were no significant differences among official language of study place country of research scholars in respect of dimensions of Personal well-being (PW) (T=1.39, P>0.05); Disabling symptoms (DS) (T=1.60, P>0.05); and Capacity to cope with the ordinary demands and stress of life (CCS) (T=1.97, P>0.05).

Table 6: distribution of scores means of research scholars in respects of their Major field of study, overall mental health and subscales of mental health ViZ, Personal well-being (PW), Anxiety factor (AF), Disabling symptoms (DS), Capacity to establish constructive relationship (CER) and Capacity to cope with the ordinary demands and stress of life (CCS).

Independent Var	Freq	OMH	PW	AF	DS	CER	CCS
Science	15	34.63	11.53	5.40	5.06	6.20	6.13
Arts	23	39.13	13.04	5.95	6.13	7.43	6.34
Engineering	23	33.69	11.39	5.34	4.30	6.39	6.13
Agriculture	19	36.97	11.89	5.84	5.21	6.36	6.52

A significant difference was found among research scholar's overall mental health scores who were studying in Arts and those who were studying in engineering field (F=2.761,p<0.05). There was no significant difference among other groups in aspect of field of study and overall mental health. In addition, there was significant difference among Arts and engineering research scholars in aspect of Disabling symptoms (DS)

dimension of mental health (F=6.541, P<0.05). Further, there were found no significant differences among different groups of research scholars in respect of field of study and dimensions of Personal well being (PW) (F=1.340, P>0.05); Anxiety factor (AF) (F=.627, P>0.05); Capacity to establish constructive relationship (CER) (F=2.174, P>0.05), and Capacity to cope with the ordinary demands and stress of life (CCS) (F=. 426, P>0.05).

Table 7: distribution of scores means of research scholars in respects of their Presented/Published Article numbers, overall mental health and subscales of mental health ViZ, Personal well-being (PW), Anxiety factor (AF), Disabling symptoms (DS), Capacity to establish constructive relationship (CER) and Capacity to cope with the ordinary demands and stress of life (CCS).

Independent Var	Freq	OMH	PW	AF	DS	CER	CCS
Null Article	33	35.21	11.78	5.12	5.21	6.51	6.39
One Article	17	35.05	11.88	5.23	4.64	6.64	6.23
Two Articles	30	37.33	12.33	6.46	5.46	6.80	6.20

There was no significant difference among overall mental health scores of research scholars and their presented/published article numbers (F=. 908, P>0.05). A significant difference was found among research scholars that presented or published two and more Articles with those who did not had article as well as one article in respect of their anxiety factors dimension of mental health. (F=5.839, P<0.05). Furthermore, there were found no significant differences among different groups of research scholars in respect of presented/published article numbers and dimensions of Personal well being (PW) (F=. 265, P>0.05); disability symptoms (F=1.559, P>0.05); Capacity to establish constructive

relationship (CER) (F=. 193, P>0.05), and Capacity to cope with the ordinary demands and stress of life (CCS) (F=. 199, P>0.05).

Discussion

A mentally healthy individual is one who is free from anxiety, and disabling symptoms. If he can establish relationships with others, cops well with which life demands then his physical, mental, social, and emotional well-being can be complete (Kamau, 1992).

One of the important findings of present research is difference among research scholars in aspect of mental health. The results of this study indicated that Iranian research scholars who were studying in India had a greatest level of overall mental health than those who were studying in England, Russia, Australia, and other countries of related to this investigation. Defrank et al (1988) compared managerial samples from the United States, India, and Japan. Researchers found that Japanese executives reported more stress in all aspects of life than either the Americans or the Indians. Also analyse of dimensions of mental health regard to this investigation refers that research scholars who were studying in India significantly had greatest level of personal well being, disability symptoms, and capacity of cope with the ordinary demands and stress life dimensions of mental health than those who are study in Australia and other countries under the study. In addition, findings make clear that students who were studying in India had a highest level in aspects of capacity to establish constructive relationship dimension than those who are studying in England and Russia.

French and his associates (1982), in their Person – Environment fit theory explained that the resources and demands of the work environment may be or may not fit the needs, goals, and abilities of the individual. When work demands do not fit the person's abilities and needs, the individual will show signs of strain that will eventually lead to illness. According to Mechanic (1969), human feeling and behavior are extremely variable. The same Person may be happy or sad, energetic or lethargic, anxious or calm depending on his environment and personal life at the time. This is important that students who are study in other countries able to fit themselves with new environment but different cultural, social, and economical conditions of the countries may be effect level of mental health of individuals. This study makes clear in which perhaps approximately similar and close cultural status between Iran and India is major cause of healthy of Iranian research scholars. Another reasons may be existence research scholar – supervisor as well as university staff members good relationships, and likely higher standards of mental health among Indian people in which related to contains of their preview traditional culture so on.

Also no exists significantly different among research scholars who were studying in India with those who were studying in Australia and other in respects of anxiety factors and capacity to establish constructive relationship as well as with those who were studying in England and Russia in aspects of personal well being, disability symptoms, anxiety factors, and capacity of cope with the ordinary demands and stress life dimensions. In this regard Werner (2001), explained the process of transitioning and adapting to college life, and the importance of support services and employment preparation for college students whose; principal diagnosis; fell within one of the

following categories of psychiatric disability recognized in (1994): major depressive disorder, bipolar disorders, anxiety disorders, eating disorders, and schizophrenic disorders.

Another results of the present study appear that no exists significant difference among whole of the research scholars who were studying in England, Russia, Australia, and other countries in respects of overall mental health and its dimensions. It is feared that man kind, which is now an the threshold of the twenty first century will find its existence still more impersonal, complex as well as harshly competitive particularly in Industrial and developed countries such as related countries to this research. Results make clear that Iranian research scholars in developed counties were similar in respect of level of mental health. These countries had approximately equal influences upon mental health of Iranian students. Another findings of this research indicated that no exists significantly different between two groups of blow and above age of 36 year of research scholars in respects of their overall mental health and its dimensions.

Clearly, all these qualities of mental health are of fundamental importance to good adjustment. Reactions to environment, work, study, life, and other interpersonal relations are constantly affected by our state of mind. A sense of well – being, emotional stability, and mental efficiency are of inestimable value in the resolution of personal difficulties and conflicts.

The current study discovered that research scholars that academic language of their university of study place country was English significantly had a greatest level of overall mental health as well as its anxiety factors dimension than those who were studying in universities in which academic language was Non- English. In addition, research scholars

who were studying in English language countries had significantly a highest level of overall mental health as well as anxiety factors and capacity to establish constructive relationship dimensions than those who were studying in Non – English language countries.

Nowadays, almost of the non- English countries laid out English as a second language in, own themselves educational system. English language has been known, as an international language in which is useful for various purpose of effective communication such as relationship among research scholars and his supervisor, to read books, journals, and documents as well as to write thesis and papers. In regards to findings of this research it is important that to maintain mentally healthy persons, they able by common language to make appropriate communication with related individuals in the university as well as study place country easily and without any anxious and tension.

Another finding of the present study indicated that there no significantly difference among research scholars who were studying under educational system of research – course in compare to those who were studying under educational system of research only in respect of overall mental health and its dimensions.

Furthermore, findings refers that research scholars who were studying in field of arts had significantly greatest degree of overall mental health as well as its disability symptoms dimension than those who were studying in field of engineering. There was no difference among any other groups of research scholars in relation to major field of study and their mental health.

Another findings of this study make clear that research scholars who presented or published two and more Articles had highest level of anxiety factors dimension of mental

health in compare to those who didn't had presented or published article as well as those who had one presented or published article. Further, there was no significantly difference among research scholars in relation to number of presented or published articles and their overall mental health as well as dimensions of Personal well being, disability symptoms, Capacity to establish constructive relationship, and Capacity to cope with the ordinary demands and stress of life. Sharma (1969) indicated that differences in academic achievement did not influence mental health.

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A COMPARATIVE STUDY OF ETHICAL PRACTICES HIGHER LEARNING INSTITUTIONS IN MALAYSIA

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Abstract

Ethical practices in this paper refer to work ethics and communication ethics practices among lecturers in two distinct universities in Malaysia, namely, Northern University of Malaysia (UUM) and International Islamic University, Malaysia (IIUM). Both abide to different philosophies and visions in molding each student towards achieving an academic excellence. The objective of the study is to find out the levels of work and communication ethics practiced in both universities. A self-administered questionnaire was used in the survey resulting in a total of 375 respondents with 230 respondents from UUM and 145 from IIUM. Results revealed that work ethics and communication ethics are positively correlated. This shows that work performance that is partly consist of work ethics and partly supported by communication ethics are adhered to its fullest. Thus, the results indicate that lecturers in both universities practice sound ethical standards. This reflects the ability of Malaysia in preparing the nation with educated and ethical workforce. Malaysia's hope of becoming an educational center of

excellence for the Asian region will be materialized despite of the global challenges that it has to face.

Key words: work ethics, communication ethics, ethical practices

Introduction

Ethics is a necessary element in an organization because it guides the employees to act accordingly within the organizational culture. It also determines the job scope of the employees so that they realize their roles in their organizations. By abiding to work ethics requirements, the employees will be able to perform efficiently in their organizations. Hence, work ethics is crucial for an organization to control employees' moral and to protect employees' rights based on rules and regulations. This scenario should exist in all higher learning institutions if the organizations want the public to have good impression and image of them, besides having a high regard and respect for their contribution in educating the manpower in the labor market.

From the organizational communication point of view, work ethics is regarded as a tool to achieve job effectiveness in accomplishing organizational goals. The relationship between organizational communication and ethics is strong, as both are interdependent. Both work ethics and communication ethics focus on human development at workplace.

Communication ethics is a part of work ethics as employees use communication in managing their duties through speaking, reading, listening, and writing. From organizational communication perspective, communication ethics is an art of persuasion,

and there must be communication ethics to follow that are set by the organization (Cheney and Thompkins, 1984; Johannesen, 1990; and Hoffmann, 2000).

There are five principles in Islamic communication ethics that are ascribed to, namely, (1) speak the truth, (2) speak justly, (3) check the information received, (4) use nice words, and (5) practice what you preach (Mohd. Yusof, 1989). Accurate information is attained when the management relay objective message to the employees and the vice versa. Therefore, top-down and bottom-up communication should reveal the true picture of the situation in organization. Creating false information, spreading rumor and hoarding information will damage the organization image and integrity.

It is important for the lecturers to interact justly when dealing with his/her colleagues, superiors, subordinates and students in the universities. Communicating justly especially to students ensures that lecturers treat their students professionally besides avoiding nepotism in the university.

Another aspect of communication ethics in an organization is verification of the information received. As a lecturer, it important to ensure that the information you receive is accurate and truthful to avoid conflict that might damage the reputation of the university as a whole. Furthermore, accurate and true information that can be practiced by students are an added value when they work in the market place for the benefit of the industry as a whole.

 The culture of greeting is an organization reflects the caring and respect for one another. The greetings at workplace and at classroom indicate a sense of respect,

appreciation, and equal treatment of each other as an individual. The students are no exception. They, too, need to be cared for by the lecturers just like their own children.

As lecturers, we are encouraged to practice what we teach and believe in what we know best for the students. In this way, we are able to gain trust from our students. Then only would the students would have a high respect for their lecturers.

From the above scenario, a few questions linger in our minds as lecturers. Among them, what really groom us to be ethical at workplace? Could they be the inherent characteristics of our personal selves? Could they be the organizational characteristics that mold us while working at the university? What about the lecturers' levels of communication ethics and the levels of work ethics practices? Could the personal, organization and communication ethics related to the work ethics at workplace to exhibit a profound work performance?

To summarize the gist of the paper, a theoretical framework is developed to help smooth out the understanding of the overall intent of the study

Personal Characteristics
    Gender
    Age

Organizational Characteristics _____**Work Ethics**
    Education
    Present service
    Previous service
    Salary

Communication Ethics _____
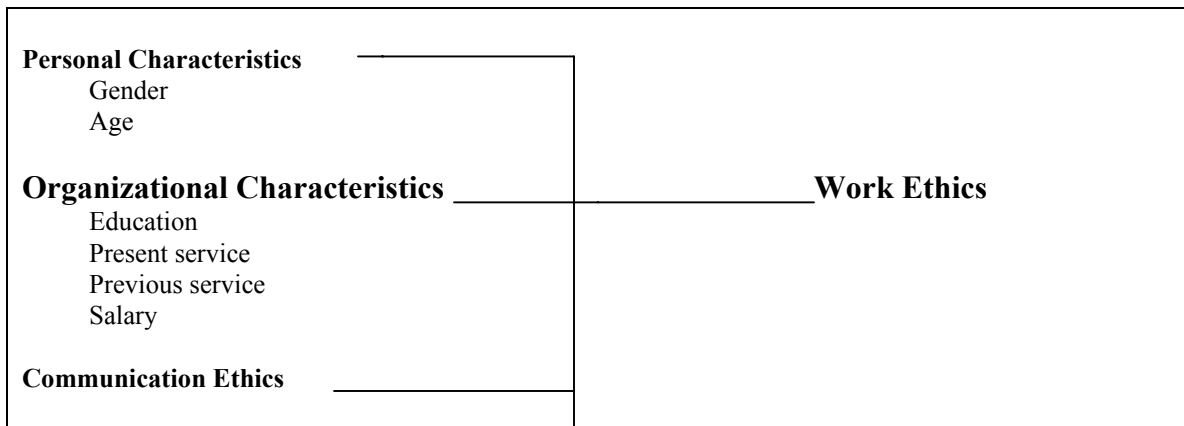
Figure 1: Proposed Model for Work Ethics

The Present Study

The study was conducted at UUM and IIUM involving 375 respondents, comprising of 230 from a population of 575 lecturers in UUM and 145 from 899 lecturers in IIUM. The respondents representing the different faculties were selected at random. The respondents were given two weeks to complete the questionnaire.

The selection of the two universities is based on their similarities rather than their differences. Their similarities are in terms of available facilities, new campus, similar number of student enrollment, and experience of lecturers.

On the whole, the respondents are Malay males with an average age of 35 years old, mainly with Masters degree, receiving income of RM3500, with past experience of about two years. Those from UUM are currently serving UUM for the past two years while those at IIUM have been serving for the past six years.

The analysis was done using SPSS 10.0 WIN to expedite the findings that would answer the research questions postulated through the use of descriptive statistics, one-sample t-test, correlation, and regression analysis. The communication ethics and work ethics items were subjected to inter-item reliability test.

Results and Discussions

The results of the study are presented in terms of inter-item reliability, the levels of communication ethics and the levels of work ethics, and finally the factors that influence work ethics.

Reliability Test of Work Ethics and Communication Ethics Items

The research instrument was developed from IIUM Work Ethics Guidelines and was tested for its reliability. The alpha Cronbach value of communication ethics for UUM is 0.92 and for IIUM is 0.86 while the alpha Cronbach value of work ethics for UUM is 0.97 and for IIUM is 0.90 with two items being deleted, that are, "shoulder official responsibility sincerely" and "promote unity among staff". This implies that the items are reliable indicators of communication ethics and work ethics, accordingly.

Levels of Communication Ethics and Work Ethics Practiced

The levels of communication ethics are presented in terms the means and standard deviations for all items. Table 1 presents the outcome of the communication ethics for UUM while Table 2 shows the results of the communication ethics for IIUM. When tested against the median (3), all the t-test values are significant. This implies that the lecturers from both universities exhibit a significantly high degree of communication ethics.

The levels of work ethics for both universities are presented in Table 3 for UUM and Table 4 for IIUM. Lecturers in both universities exhibit high levels of work ethics as tested against the median value (3). The results are supported by all the t-tests for all items. This implies that work ethics are being practiced in relation to their teaching profession as lecturers in higher learning institutions.

Personal Characteristics, Organizational Characteristics and Communication Ethics with Work Ethics

The findings of the study reveal that in terms of personal characteristics, even though UUM lecturers are exercising work ethics but it is not influenced by sex, present service, and salary. However, age (r=0.18, p=0.003), previous experience (r=0.20, p=0.001) and communication ethics (r=0.33,p=0.0001) are positively related with work ethics in UUM. When these variables are regressed against work ethics only communication ethics and previous service are considered as factors influencing work ethics.

In IIUM no specific personal and organizational variables correlated with work ethics. However, communication ethics (r=0.31, p=0.0001) is positively correlated with work ethics. This implies in IIUM communication ethical practices promote ethical work.

To summarize the findings in both universities, different models are formulated.
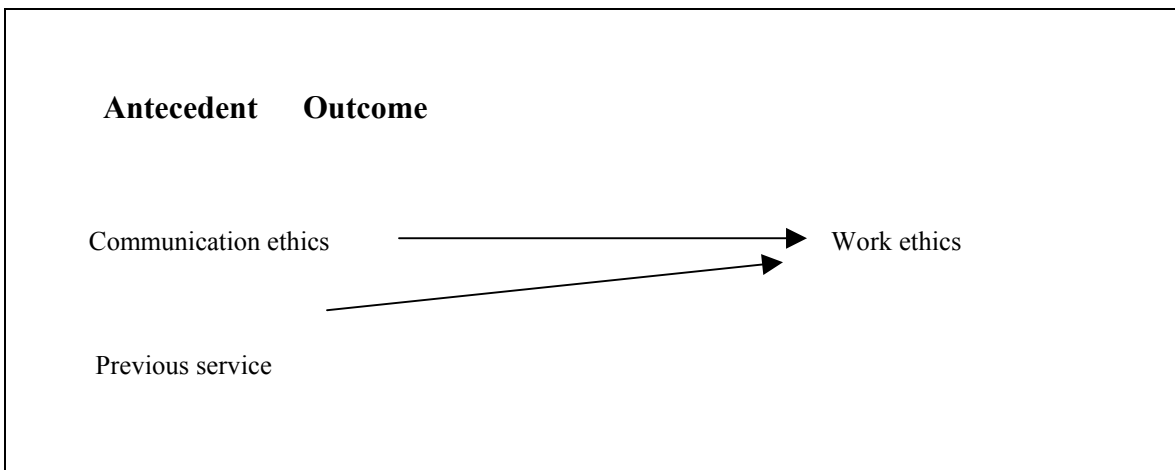
Figure 2: UUM Model for Work Ethics
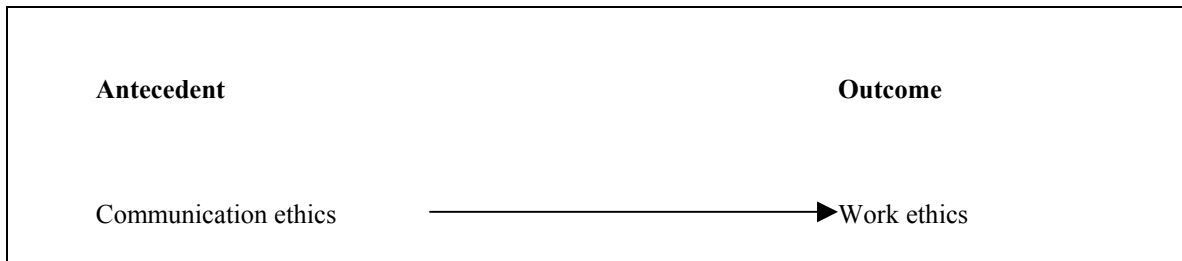
Figure 3: IIUM Model for Work Ethics

Conclusions

Based on the formulated final model for both universities, it indicates that work ethics is influenced by communication ethics that is revealed through the communication attitudes and behavior of the lecturers in the respective universities. Communication is learned and dynamic. So is communication ethics. The ethics is learned from colleagues, superiors and the management personnel that exhibit ethical values and behavior within the campus environment. It is also good to send the staff for training in communication ethics that deems conducive for the university. This is because the communication ethics is the main factor that influences work ethics that in turn affects the employees' performance as a whole. The integrity of the university in educating the workforce will then be highly respected by the public. Malaysia in general will gain through having ethical and responsible workforce.

Suggestions for Future Research

The study is a preliminary study in ethical practices at workplace with consideration mainly on communication ethics and some selected personal characteristics and selected organizational characteristics. Of course, there are others variable that are

pertinent in studying ethics at workplace. Therefore, it is suggested the following should be considered in future research on work ethics:

1. To include other variables such as work pressure, stress, socialization, organizational structure, and work culture.

2. To do triangulation study involving both quantitative research design and qualitative research design e.g. in-depth interview and case study to complement the self report based on survey method to really determine the actual practices.

3. To include another method of data gathering such as participant observation and/ or non-participant observation should be considered to get reliable data for a sensitive study such as ethical practices.

4. To refer to secondary data such as complaints, grievance, and reprimand that are used to detect those who have violated the ethical practices of the organization.

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Table 1: Means and Standard Deviations of Communication Ethics (UUM=230)

Communication Ethics Item	Mean	Standard Deviation	T	p
Communicate for the pleasure of Allah	3.95	0.79	18.18	0.0001
Concern for the quality of communication	4.14	0.79	21.97	0.0001
Conscious of the purpose of communication	4.10	0.75	22.45	0.0001
Always thinking good of others	4.22	0.75	24.62	0.0001
Able to accept criticism sincerely	3.99	0.72	20.95	0.0001
Be polite in dealing with people	4.37	0.73	28.45	0.0001
Encourage teamwork	4.30	0.82	24.18	0.0001
Seek advice from authority for external activities	3.94	0.89	16.01	0.0001
Use appropriate channel when complaining	4.00	0.87	17.47	0.0001
Observe punctuality in all occasions	4.19	0.79	22.98	0.0001
Promote good name of the organization	4.32	0.74	27.00	0.0001
Avoid conflict	4.19	0.85	21.38	0.0001
Provide accurate information	4.37	0.67	31.19	0.0001
Ignore rumor	3.74	0.92	12.19	0.0001
Concern over slandering act	4.00	0.84	18.30	0.0001

5-point scale: 1- never, 2 – rarely, 3 – sometimes, 4 – most of the times, 5 – always

Table 2: Percentage Distribution, Means and Standard Deviations of Communication Ethics (IIUM=145)

Communication Ethics Items	Mean	Standard Deviation	T	p
Communicate for the pleasure of Allah	4.39	0.96	17.26	0.0001
Concern for the quality of communication	4.31	0.86	18.39	0.0001
Conscious of the purpose of communication	4.24	0.92	16.19	0.0001
Always thinking good of others	4.26	0.85	17.79	0.0001
Able to accept criticism sincerely	4.12	0.94	14.24	0.0001
Be polite in dealing with people	4.50	0.88	20.52	0.0001
Encourage teamwork	4.25	0.93	16.17	0.0001
Seek advice from authority for external activities	3.78	1.20	7.88	0.0001
Use appropriate channel when complaining	4.06	1.07	11.96	0.0001
Observe punctuality in all occasions	4.30	0.93	16.72	0.0001
Promote good name of the organization	4.47	0.88	19.97	0.0001
Avoid conflict	4.37	0.96	17.04	0.0001
Provide accurate information	4.41	0.89	19.05	0.0001
Ignore rumor	4.33	3.57	4.49	0.0001
Concern over slandering act	4.13	1.25	10.84	0.0001

5-point scale: 1- never, 2 – rarely, 3 – sometimes, 4 – most of the times, 5 – always

Table 3: Means and Standard Deviations of Work Ethics (UUM=230)

Work Ethics Items	Mean	Standard Deviation	T	p
Work for the sake of Allah	4.14	1.14	15.11	0.0001
Strive for excellence in job-performance	4.25	0.92	20.67	0.0001
Sincere in working	4.29	1.08	18.07	0.0001
Always conscious of Allah's expectation	4.29	1.00	19.65	0.0001
Treat others kindly	4.18	1.03	17.39	0.0001
Always evaluate oneself	3.88	1.01	13.30	0.0001
Sincerely in cooperating with others	4.18	0.94	18.95	0.0001
Do not undermine others capability	3.94	1.02	14.00	0.0001
Shoulder official responsibility sincerely	4.10	1.01	16.55	0.0001
Perform official duties at the best	4.26	1.03	18.51	0.0001
Loyalty is to Allah alone	4.26	1.07	17.89	0.0001
Promote unity among staff	3.97	1.03	14.37	0.0001
Observe proper adab between the opposite sex	4.00	1.07	14.27	0.0001
Attend all formal occasions as instructed	3.53	1.00	8.08	0.0001
Protect organizational confidential information	4.28	1.01	19.17	0.0001

5-point scale: 1- never, 2 – rarely, 3 – sometimes, 4 – most of the times, 5 – always

Table 4: Means and Standard Deviations of Work Ethics (IIUM=145)

Work Ethics Items	Mean	Standard Deviation	T	p
Work for the sake of Allah	4.58	0.78	24.23	0.0001
Strive for excellence in job-performance	4.59	0.64	29.75	0.0001
Sincere in working	4.60	0.73	26.33	0.0001
Always conscious of Allah's expectation	4.45	0.88	19.89	0.0001
Treat others kindly	4.57	0.68	27.87	0.0001
Always evaluate oneself	4.17	0.83	16.9	0.000

			6	1
Sincerely in cooperating with others	4.44	0.72	24.17	0.0001
Do not undermine others capability	4.25	1.06	14.14	0.0001
Shoulder official responsibility sincerely	4.85	4.18	5.30	0.0001
Perform official duties at the best	4.50	0.67	26.91	0.0001
Loyalty is to Allah alone	4.71	0.72	28.55	0.0001
Promote unity among staff	4.61	3.41	5.67	0.0001
Observe proper adab between the opposite sex	4.69	0.62	32.92	0.0001
Attend all formal occasions as instructed	4.20	0.80	18.06	0.0001
Protect organizational confidential information	4.54	0.72	25.76	0.0001

5-point scale: 1- never, 2 – rarely, 3 – sometimes, 4 – most of the times, 5 – always

Table 5: Regression Analysis Showing Relationship between Work Ethics with Communication Ethics, Personal Characteristics, and Organizational Characteristics (UUM=230)

Variables	Correlation	Beta Weight	T-test	p
Personal Characteristics				
Gender	-0.06	0.070	1.08	0.28
Age	0.18**	0.01	0.13	0.90
Organizational Characteristics				
Education	-0.14*	-0.11	-1.54	0.13
Present service	-0.01	-0.03	-0.35	0.72
Previous service	0.20**	0.20	2.27	0.02
Salary	0.10	-0.07	-0.82	0.42
Communication Ethics	0.33**	0.30	4.73	0.0001

* p<0.05; ** p<0.01
F=5.61; df = 7, 222; p=0.0001; R sq adj. = 0.12

Table 6: Regression Analysis Showing Relationship between Work Ethics with Communication Ethics, Personal Characteristics, and Organizational Characteristics (IIUM=116)

Variables	Correlation	Beta Weight	T-test	p
Personal Characteristics				
Gender	-0.01	-0.04	-0.37	0.71
Age	-0.01	0.12	0.78	0.44
Organizational Characteristics				
Education	-0.08	-0.11	-0.90	0.37
Present service	0.10	0.00	0.01	0.99
Previous service	-0.10	-0.14	-1.37	0.17
Salary	0.03	-0.17	-1.03	0.31
Communication Ethics	0.31**	0.33	3.31	0.001

** p<0.05   F=2.05; df = 7, 108; p = 0.06; R sq adj. = 0.06

PROCEEDINGS   THEME 1   THEME 2   THEME 3   THEME 4

SMART SCHOOL TEACHER TRAINING PROGRAMME AND ITS IMPACT ON INTEGRATING TECHNOLOGY INTO TEACHING AND LEARNING PROCESSES

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ABSTRACT

The aim of this study was to evaluate the effectiveness of conducting the 14 Weeks Inservice (INSET) Course for the training of Smart School teachers, which was conducted by the Teacher Education Division, Ministry of Education, Malaysia and the In-House Training at the school levels. Questionnaires were administered to a total of 882 teachers and 2689 students from 70 Smart Schools in Malaysia. The completed questionnaires have been analyzed using the SPSS PC 9.0 for Windows programme. The main findings from this study showed that teachers who had attended the courses had acquired all aspects of Smart School teaching and learning strategies which comprised of acquiring the concept, planning the Smart teaching, the Smart School teaching and learning processes, management of Smart classes except the Smart School assessment and evaluation techniques. However, the INSET (14 Weeks) and In-House training programmes moderately had helped the teachers to impart their knowledge and skills at the classroom levels. They were found to be weak in some aspects such as Training of Trainers' skills, Smart School assessment and evaluation skills, selecting and using appropriate softwares, generic skills, especially higher-order thinking skills, planning and development of learning packages, information technology skills and the implementation of Smart School curriculums in schools. They really needed continuous support,

coaching and monitoring from the superiors at their working places. Most teachers who had attended these courses had only being observed by their subject heads and their colleagues at their schools. In implementing the Smart School programme at their respective schools, teachers were facing numerous constraints which included heaving work load, insufficient funds, examination forces, time management, syllabi demands, empowerment aspect, receiving different directives from different superiors, students' factors, inadequate help from colleagues and supports from their superiors. They also faced problems with regards to softwares, information technology infrastructures and equipments as well as the development of learning packages. In spite of that, 82.8% of the respondents admitted that they still implemented the Smart School programmes and conducted In-House trainings for other teachers at their respective schools. Overall, the INSET (14 Weeks) Course was more effective than the In-House training programme. The monitoring and evaluation of these courses should be improved and should be done continuously. As far as the students(learners) were concerned, their reactions towards the Smart School teaching and learning strategies used by their teachers, preparation of Smart teaching materials, management of Smart classes, usage of Internet in the Smart teaching and learning seemed to be a **positive** one. Male students scored higher means than female students in term of accepting the Smart School teaching and learning. On the whole, the impact of integrating technology in the Smart School teaching and learning strategies and processes in Malaysian Smart Schools varied from moderate to high.

INTRODUCTION

Smart Schools represent one of the seven Flagship Applications of the Multimedia Corridor. Smart Schools are not only intended to produce knowledge workers who possess the requisite technological skills but also aim to inculcate critical thinking skills through intelligent learning consistent with the tenets of the National Education Philosophy.

A Smart School is an educational establishment that adopts instructional processes and educational management practices that foster systemic changes that are intended to enable learners to surmount the challenges posed by the information technology era. The Smart Schools Pilot Project was implemented in 90 schools nation-wide, comprising nine new schools (five primary and 4 secondary) and 81 existing secondary schools.

SMART SCHOOLS AND TEACHER EDUCATION

Beginning in 1998, the Teacher Education Division of the Ministry of Education, Malaysia was charged with the task of training teachers for the Smart Schools Programme. The effective training of teachers for these Smart Schools is a key factor impacting on the success of the Programme. A 14-week INSET Course for Training Smart School Teachers was conducted in selected teacher training colleges/institutions in

order to fulfil the staffing needs of Smart Schools. Teachers specializing in the teaching of the Malay language, English, Science and Mathematics participated in this course.

AIMS AND OBJECTIVES OF TRAINING SMART SCHOOL TEACHERS

AIM

The training of Smart School teachers was aimed at enhancing their professional skills of facilitating learning and fostering innovation so as to optimize instruction through the integration of technology.

OBJECTIVES

The training provided to Smart School teachers was intended to enable them to:

- plan and develop instructional packages that fulfilled the requirements of the Smart Schools curriculum
- facilitate and manage learner-centered instructional environments through the application of a variety of innovative and creative strategies
- apply and integrate technological applications such as multimedia, Internet and Digital Communications in the instructional process
- manage classrooms equipped with multimedia technology facilities.

In other words, this training course was intended to:

i. prepare teachers to confront the challenges posed by the advent of the latest educational innovations in Malaysia and in the world at large.

ii. develop intellectual capabilities that encourage teachers to reflect on their practices so as to surmount the challenges of the Information Technology Era in a manner consistent with the aims of teacher training for Smart Schools.

iii. nurture teachers' professional skills to enable them to utilize technological innovations and provide instruction that is intended to develop knowledge workers of world standard.

iv. enhance the use of technology in smart learning environments in order to improve teaching and learning processes.

v. inculcate positive attitudes and values that will meet the challenges and demands of the Information Technology Era.

vi. enhance collegial ties and facilitate reciprocal professional development so as to support and sustain the implementation of Smart Education Programmes.

vii. inculcate an appreciation for, and practice of life–long education.

(Teacher Education Division, 1998)

By experiencing the process of preparing instructional packages, it is intended that course participants will able to:

- understand and appreciate the teaching – learning concepts that need to be implemented in Smart Schools,

- enhance their understanding of smart school skills so as to improve their professionalism,

- translate the specifications of the Smart Schools curriculum into teaching – learning resources,

- apply the knowledge and expertise that they have acquired from the course in planning and implementing smart instructional learning practices; and,

- develop instructional modules infused with smart learning features for use in simulations and practicums.

(Teacher Education Division, 1999)

Components of the Curriculum for the 14-Week INSET

Course for the Training of Smart School Teachers

Table 1 shows the components comprising the curriculum for the 14-week INSET Course

for the Training of Smart Schools Teachers.

COMPONENT	CONTENT	WEEK	HOURS

FOUNDATION 41.4% (126 hours)	A. Introduction
	  1. The Concept of Smart School
	  2. Managing Change
		1
		1 & 2
			6
			10

	B. Generic Skills
	  3. Assessment and Evaluation Skills
	  4. Critical & Creative Thinking Skills
	  5. Information Technology Skills
	  6. Study Skills
		1 – 6
		
		3 – 7
		
		1 – 9
		
		4 , 9 – 10
			20
			
			20
			
			60
			
			10

PEDAGOGY 58.6% (178 hours)	C. Learning Organization
	  7. Smart School Curriculum Specifications
	  8. Organization of Smart Learning
		1 – 2
		
		1 – 10
			14
			
			50

	D. Practice Of Smart Learning
	  9. Learning Packages
	  10. Simulations
	  11. Practicum
		1 – 10
		5 – 10
		11 - 14
			20
			30
			64

	E. Organization of Participants		1
	Total	14	305

The curriculum for the 14-week INSET Course for the Training of Smart Schools

Teachers comprises 5 components:

i.	Introduction	16 hours
ii.	Generic Skills	110 hours
Iii.	Learning Organization	64 hours
iv.	Practice Of Smart Learning	114 hours
v.	Organization of Participants	1 hour
	Total	305 hours

In order to implement Smart School instruction, course participants are required to master the four sets of skills below:

      i.   Assessment and Evaluation Skills

      ii.   Critical and Creative Thinking Skills

      iii. Information Technology Skills

      iv. Study Skills.

BACKGROUND TO THE STUDY AND SAMPLING PROCEDURES

This paper presents the findings of a study conducted by a research team that was a part of the "Fast Track" research project. During the 2000 / 2001 academic year, the Faculty of Education of the National University of Malaysia conducted a series of studies that investigated the effectiveness of training programmes intended to train Smart School teachers and evaluated their impact on student learning. The data for this study was collected through a questionnaire that was administered to 882 Smart School teachers. 411 of these teachers attended a 14-week INSET Course for the Training of Smart Schools Teachers at teacher training colleges / institutions while the remaining 471 teachers attended In-house courses in their respective schools. The questionnaire was also administered to 2689 students in 70 Smart Schools throughout Malaysia.

AIMS OF THE STUDY

This study evaluated the effectiveness of the 14-week INSET Course for the Training of Smart School Teachers as well as In-house Courses. Data pertaining to the effectiveness in implementing smart school instructional practices was collected from teachers who had attended these courses. The findings of this study are intended to allow those planning and implementing the Smart School teacher education programme to enhance the quality of their training programmes. The study is also intended to investigate the impact of these courses on the students in Smart Schools.

RESEARCH INSTRUMENT AND ANALYSIS OF THE DATA

Two instruments were used in the collection of data for this study. One instrument was administered to the teachers and another was administered to the students. The research team developed both instruments. The **Questionnaire for Teachers** comprised three sections. Section A comprised 14 items that were intended to collect data pertaining to the demographic composition of the respondents. Section B of the questionnaire focused on the respondents' mastery of key smart learning concepts upon completion of the 14-week INSET Course for the Training of Smart School Teachers as well as In-house Courses in Smart Schools. Section C of the questionnaire comprised 13 items that were intended to collect data pertaining to the degree to which respondents were able to apply the knowledge that they had acquired from the course that they had attended. The **Questionnaire for Students** also comprised three sections. Section A comprised 5 items that were intended to obtain the demographic data of the respondents. Section B

comprised 32 items related to smart instructional strategies and processes, classroom management, and assessment and evaluation. Section C of the questionnaire contained 12 items that focused on the use of the Internet and smart instruction.

The data obtained through these two instruments was analyzed using the SPSS data analysis software. Frequencies, percentages, means, standard deviations and t-tests were computed.

SIGNIFICANCE OF THE STUDY

The present study is significant for a number of reasons. The investigation of the effectiveness of the 14-week INSET Course for the Training of Smart Schools Teachers yielded data that can be used to improve the quality of the course as well as the components comprising it. The study gauged the participants' perceptions of the quality of the course that they had attended as well as the extent to which they perceived that the course had assisted them in implementing smart instructional practices in their respective schools. All course participants were also required to conduct in-house training sessions for their peers. The study offers insights into the extent to which course participants were able to conduct such in-house training. The findings of the study have the potential of providing valuable input to the course developers in their review and reformulation of the course curriculum. More specifically, the findings of the study have the potential of enabling the Teacher Education Division to enhance the quality of its training programme in order to develop smart school teachers who are adept in smart instructional procedures

and are, consequently, capable of assisting in the realization of the concept of smart learning.

The findings of the study also have the potential of assisting Smart School school heads in implementing smart instructional procedures in their respective schools. The findings of the study can also assist the District Education Officers in assigning staff to Smart Schools as well as in providing more relevant and effective courses in the Teacher Resource Centers in their respective school districts.

The findings of the study will also, to some extent, assist the State Education Departments in their planning, management and implementation of Smart Schools in their respective states. The data obtained from this study can also assist the Curriculum Development Center in providing pertinent training to school heads that will enable them to plan, manage and implement the Smart School curriculum more effectively. The findings of the study can also assist institutions of higher learning in updating their respective teacher education programmes as well ensuring that these programmes are consistent with the smart instructional procedures implemented in Smart Schools.

RESEARCH QUESTIONS

The collection of data in the study was guided by the following research questions.

i.   What were the demographic characteristics of the teachers attending the 14-week INSET Course for the Training of Smart School Teachers and In-house Courses in Smart Schools?

ii.   To what extent did the 14-week INSET Course for the Training of Smart Schools Teachers and In-house Courses in Smart Schools assist in enhancing the participants' knowledge and skills in the following aspects: general smart learning concepts; planning of smart learning activities; smart instructional processes; management of smart learning classrooms; and assessment and evaluation of smart learning?

iii.   To what extent did the 14-week INSET Course for the Training of Smart School Teachers and In-house Courses in Smart Schools equip the participants with the knowledge and skills necessary for implementing smart instructional procedures in their respective schools?

iv.   To what extent were teachers able to apply the knowledge and skills that they had acquired from the 14-week INSET Course for the Training of Smart Schools Teachers and In-house Courses in Smart Schools?

v.   How often were teachers monitored as they implemented the smart school concept and smart teaching – learning strategies in their respective schools?

vi.   What were the constraints that hindered teachers in applying the knowledge and skills pertaining to smart learning in their respective schools?

vii.	What were the factors that affected teachers in their implementation of smart learning concepts and smart teaching – learning strategies in their respective schools?

viii.	What were the factors that motivated teachers to persist in applying the knowledge and skills that they had acquired from the 14-week INSET Course for the Training of Smart Schools Teachers or In-house Courses in Smart Schools?

ix.	To what extent were teachers able to transfer the knowledge and skills that they had acquired from the 14-week INSET Course for the Training of Smart School Teachers to other teachers in terms of the frequency of training; the problems associated with this training and other factors that impacted on this training?

x.	What were the problems encountered by teachers when implementing smart learning concepts as well as smart teaching – learning strategies in their respective schools?

xi.	What were the factors that motivated teachers to persist in utilizing the knowledge and skills that they had acquired from the 14-week INSET Course for the Training of Smart School Teachers and In-house Courses in Smart Schools?

xii.	Was there a difference between the participants of the 14-week INSET Course for the Training of Smart School Teachers and the participants of In-house Courses in Smart Schools in terms of the extent to which they were able to acquire a knowledge of, and expertise in smart learning concepts; planning smart learning activities; implementation of smart teaching – learning processes; management of smart classrooms; and assessment and evaluation of smart learning?

xiii.   What were the demographic characteristics of Smart School learners?

xiv.   How did the learners respond to the smart teaching – learning activities conducted by smart school teachers?

xv.   How did the learners respond to the teaching – learning materials used by smart school teachers?

xvi.   How did the learners respond to the classroom management techniques used by smart school teachers?

xvii.   How did learners respond to smart learning assessment and evaluation procedures?

xviii.   How did the learners respond to the use of the Internet in instruction?

xix.   How did the learners respond to smart learning?

xx.   Was there a difference between male and female learners in their responses to the use of smart teaching – learning strategies; the use of smart teaching – learning materials; management of smart classrooms; smart learning assessment and evaluation procedures; the use of the Internet; and smart learning?

STUDIES OF SMART SCHOOLS

A number of studies of smart schools have been carried out. Most of these studies have investigated the effectiveness of the programmes developed for training smart school

teachers as well as the extent to which smart instructional procedures have been implemented in the pilot Smart Schools throughout Malaysia.

In his investigation of Malay language teachers' perceptions of the Training Course for Smart School Teachers, Mazlan A. Aziz (1999) found that these teachers had a good understanding of the aims and objectives of the training course. However, these teachers also felt that several aspects of the course, such as information technology skills, preparation of instructional packages, and simulations using these instructional packages, were adequate. The training course did however succeed in exposing teachers to the key concepts of Smart Schools and also served to motivate them in their teaching.

Zainal Abidin Hassan (1999) investigated the teaching and learning of the Malay language in two Smart Schools in Johore state. His respondents were 60 Fourth Form students. The findings of his study indicated that students were very interested in, and motivated by, computer-assisted learning and Internet-based materials. Teachers also had a positive attitude towards the use of Internet-based learning materials. However, students' as well as teachers' mastery of the Internet was poor. These findings are consistent with those from the study by Jamaluddin Badusah (1996) who asserts that the computer can assist the teacher but not replace her. The computer should be viewed as an effective tool that can assist and complement the teacher.

Arniza Mokhtar (2001) investigated the problems related to the implementation of smart instructional strategies in the teaching of the Malay language in Negri Sembilan state.

The study investigated how teachers perceived the implementation of several aspects of smart instruction, including pedagogical skills, instructional activities, integration of skills and infusion of content from other subject areas as well as the use of information technology in teaching. Several problems pertaining to the implementation of smart instruction were also investigated, including the resource center, classroom organization, learner attitudes, knowledge and skills as well as the impact of the school administrative system. The sample for the study comprised 62 Malay language teachers from six Smart Schools in Negri Sembilan state. A questionnaire was used in the collection of the data. The findings indicated that, as a whole, teachers often used appropriate pedagogy and instructional activities. They also integrated skills and infused content from other subject areas but seldom used information technology in their teaching. A t-test indicated that there was no significant difference in the application of Malay language teaching strategies by teachers who had undergone smart instruction training and those who had not. The t-test indicated, however, that a significant difference existed between teachers teaching in residential schools and those teaching in day schools in their implementation of various Malay language teaching strategies other than the integration of skills and the infusion of content. A large proportion of teachers also reported that they encountered problems in the implementation of various Malay language teaching strategies.

Lee Lai Guan et. al. (1998) conducted a study that evaluated the effectiveness of the implementation of a 14-week INSET Course for the Training of Smart Schools Teachers. The findings indicated that a majority of the participants were satisfied with the implementation of the different aspects of the course curriculum. Nonetheless, a sizeable

proportion of the participants indicated that they were dissatisfied with the presentation skills of several of the course facilitators, the duration of thecourse, the sequencing of the course topics and the equipment available in the schools where they had carried out their teaching practicum. The main difficulties reported by the respondents were their inability to master information technology skills, inadequate finance, difficulty in developing instructional packages and the inability to infuse the generic skills into their instruction during the practicum.

Lee Lai Guan et. al. (2000) followed-up with another study in the pilot Smart Schools in Kedah and Perlis states. This study attempted to investigate the extent to which smart learning elements were infused into the following aspects of the instructional process: (i) assessment and evaluation skills; (ii) study skills; (iii) critical and creative thinking skills; (iv) managing smart instruction; and, (v) information technology skills. Other aspects of the smart instructional process that were investigated included: (i) the extent to which information technology skills were utilized; (ii) availability of technological equipment and facilities for smart learning; and, (ii) the problems encountered by teachers in implementing instructional activities. The data for the study was obtained through the use of a questionnaire as well as interviews with 40 teachers who had undergone the 14-week INSET Course for the Training of Smart Schools Teachers, from eight pilot Smart Schools in Kedah and Perlis states. The findings indicated that many teachers were only occasionally able to apply the different skills except for information technology skills. The findings also indicated that many teachers were unable to reap the full benefits of infusing information technology into the instructional process. It was also found that

information technology facilities for smart teaching and learning were lacking in many schools. The main problems reported by the respondents were the negative impact of the examination-oriented school curriculum, the immense effort expended on preparing instructional materials and activities, the lack of existing instructional packages that could serve as exemplars, and the effort required to adapt existing instructional packages to meet classroom needs.

Nik Zaharah (2000), in her study of the role of a principal in the management of information technology resources in a Smart School in Kelantan state, found that the principal adopted a supportive and success-oriented leadership style in the management of information technology resources. The efforts of the principal had resulted in 80% of the teaching and support staff being computer literate. The staff also applied these skills in performing their jobs. As well, 67.5% of 200 students from this school had acquired computer literacy skills as a consequence of engaging in the instructional activities conducted in the school.

Siti Junaidah (1999) conducted a study that was intended to identify and understand teachers' mindsets and their perceptions of the Smart School programme. The teachers' mindsets were investigated by deploying two of the dimensions of the Model of Four Mindsets, that is, level of attainment and level of satisfaction. Questionnaires as well as interviews were used to collect data from 120 teachers in Dengkil National School and Dengkil National Secondary School in Kuala Langat district. The findings indicated that almost all the teachers in the two schools had a positive perception of the Smart School

project. However, only 53.3% of these teachers had a clear understanding of the concept of a smart school. For the two dimensions of the mindsets of the respondents, 87.5%of the teachers had a high attainment level while 95% had a high satisfaction level. Based on these findings, it was recommended that various initiatives be undertaken to reduce satisfaction levels while raising attainment levels so that the teachers' mindsets could be changed to foster positive and productive attitudes and actions as well as to encourage teachers to be more proactive.

The study by Siti Suria Salim (2000) attempted to investigate smart school teachers' understanding of, and preparedness for change. The data, obtained from a questionnaire administered to 45 smart school teachers in Selangor state, showed that the teachers understood the aims of changes arising from smart instructional procedures. Nevertheless, these teachers reported that their implementation of smart instructional processes was only at a moderate level. It was found that 75.5% of the respondents persisted in using conventional teaching techniques. The study also indicated that there was a significant relationship between the teachers' understanding of, and their preparedness to, confront change. Among the constraints reported by the teachers in their attempts to implement changes in their instructional techniques were inadequate training, insufficient equipment and lack of support from parents. 73.3% of the respondents indicated their dissatisfaction with the failure of their respective principals to provide adequate support and assistance in implementing smart instructional procedures. 51.1% of the respondents were only somewhat prepared to use computers. Of those respondents who had attended Smart School training courses, 60% indicated that they

were not satisfied with the explanations provided of the aims and objectives of the instructional changes. 84.4% of the respondents expressed their dissatisfaction with the financial resources that were provided to upgrade and maintain computer equipment. Another 91.1% were dissatisfied with the software that had been provided. The study also found that the problems of time constraints as well as the heavy workloads that teachers shouldered could be alleviated by a supportive school administration. Also, 84.4% of the respondents were dissatisfied with the level of support offered by parents in the implementation of the activities organized by the school. Other problems and needs included training in instructional techniques, information technology courses, inadequate supervision and monitoring of the implementation of smart instructional procedures and large student enrolments.

The Schools Division, Ministry of Education Malaysia (2001) prepared a report based on data obtained from the monitoring of the implementation of the Smart School Pilot Project in Malaysia. Fourteen monitoring teams were assembled. The teams monitored the implementation of the programme in 62 schools in July and August 2000. The aim of this project was to determine (i) the extent to which the schools had implemented the Smart School programme; and, (ii) the problems that they had encountered in its implementation. The data collected through four different instruments was used to group the schools into one of four categories, based on the degree to which each school had implemented the programme. The four categories were Basic; Developing; Developed; and, Advanced. The findings of this study showed that:

- Management of the schools was between the Developing and Developed levels.

- Management of the languages – English and Malay – was between the Developing and Developed levels;

- Management of Science and Mathematics was between the Developing and Developed levels;

- The implementation of instructional processes for the Malay language was at the Developing and Developed levels;

- The implementation of instructional processes for English was at the Developing Level;

- The implementation of instructional processes for Science was at the Developing and Developed levels;

- The implementation of instructional processes for Mathematics was at the Developing and Developed levels;

This report also indicated that schools encountered a number of problems in implementing the Smart School Project. Among these were disruptions in electricity supply; high utility costs; security of equipment and software; the lack of a smart school culture within the school; inadequate computer laboratories; insufficient software; large class sizes; shortage of teachers who are proficient in their respective subject areas; time constraints; public exam formats that are inconsistent with smart school instructional processes; school administrators who lack an adequate understanding of the smart school curriculum and the demands it imposes on teachers.

FINDINGS OF THE STUDY

The questionnaire developed for this study was administered to 882 smart school teachers and 2689 students in 70 Smart Schools (see Table 1).

Questionnaire for Teachers

The findings pertaining to the concept of smart schools indicated that the 14-week INSET Course for the Training of Smart School Teachers and In-house Courses in Smart Schools succeeded in raising the teachers' understanding of, and skills in, several aspects, including: i) the general concept of Smart Schools (60.5%), ii) the Smart School curriculum (85.0%), iii) change management (59.5%), iv) concept and principles of developing instructional packages (71.4%), use of technology (69.5%), vi) the particular subject being taught by the teacher in the Smart School, that is, Science, Mathematics, Malay or English Language (70.4%), vii) Smart School instructional strategies (76.8%) and viii) enhancing incidental knowledge and skills pertinent to the teaching in Smart Schools. However, there were two aspects in which deficiencies were noted: the national-level assessment system for Smart Schools and the new skills for the minor subjects taught in Smart Schools (that are subjects other than Science, Mathematics, Malay language and English language).

In terms of planning smart instructional activities, the study showed that the 14-week INSET Course for the Training of Smart School Teachers and In-house Courses in Smart Schools succeeded in enhancing the teachers' knowledge of, and skills in, various aspects of Smart School instruction. It was found that teachers were able to match as well as

adapt subject content to the ability of the learners; select appropriate instructional techniques to enhance learning; plan a variety of teaching and learning activities; create a classroom environment that was conducive to learning; develop instructional materials; and select instructional methods that were suited to the ability of the learners. However, teachers required considerable guidance in selecting and using appropriate instructional software.

As a whole, the study indicated that the 14-week INSET Course for the Training of Smart School Teachers and In-house Courses in Smart Schools succeeded in enhancing the participants understanding of, and skills in, the smart instructional process. Consequently, these teachers were able to reinforce learning; explain concepts; pitch their instruction to the ability of the learners; vary their teaching techniques; conduct remedial activities; provide enrichment activities; transmit subject content; use a variety of instructional materials; utilize instructional software; infuse moral values; improve learner participation; and, develop the learners' thinking skills including critical and creative thinking skills.

Table 1
Distribution of Teachers and Students According to State, School
and Type of Smart School Teacher Training Course

No.	States	Number Of Schools	Teachers			Students	
			14-Weeks Course	In-House Training	Total	Number of Students	Percentages
1.	Kelantan	6	38 (38.0)	62 (62.0)	100 (100.0)	272	(10.1)
2.	Wilayah Persekutuan	9	71 (46.1)	83 (53.9)	154 (100.0)	361	(13.4)

3.	Johor	9	28 (40.6)	41 (59.4)	69 (100.0)	333	(12.4)
4..	Selangor	6	29 (46.0)	34 (54.0)	63 (100.0)	231	(8.6)
5.	Negeri Sembilan	6	45 (43.7)	58 (56.3)	103 (100.0)	252	(9.4)
6.	Pahang	6	36 (50.7)	35 (49.3)	71 (100.0)	234	(8.7)
7.	Sabah	4	26 (49.1)	27 (50.9)	53 (100,0)	148	(5.5)
8.	Kedah	4	34 (61.8)	21 (38.2)	55 (100.0)	162	(6.0)
9.	Melaka	2	12 (42.9)	16 (57.1)	28 (100.0)	80	(3.0)
10.	Terengganu	2	10 (45.5)	12 (54.5)	22 (100.0)	69	(2.6)
11.	Perak	7	33 (52.4)	30 (47.6)	63 (100.0)	230	(8.6)
12.	Pulau Pinang	2	9 (39.1)	14 (60.9)	33 (100.0)	51	(1.9)
13.	Sarawak	5	28 (51.9)	26 (48.1)	54 (100.0)	186	(6.9)
14.	Perlis	2	12 (50.0)	12 (50.0)	24 (100.0)	80	(3.0)
	TOTAL	70	411 (46.6)	471 (53.4)	882 (100.0)	2689	(100.0)

The findings also indicated that the 14-week INSET Course for the Training of Smart School Teachers and In-house Courses in Smart Schools succeeded in enhancing the participants' understanding of, and skills in, managing smart classrooms. The findings indicated that teachers adopted a democratic teaching style in their classrooms; promoted active learning environments; used smart instructional technology; developed a classroom environment that encouraged learning; generated learner interest in smart instructional processes; instilled discipline among the learners; motivated the learners; made optimum use of allotted time; and, enhanced interaction in the classroom.

A large proportion of the respondents agreed that the 14-week INSET Course for the Training of Smart School Teachers and In-house Courses in Smart Schools assisted them in developing their understanding of, and skills in, various aspects of smart learning assessment and evaluation. Teachers who had participated in these courses reported that they were able to select teaching materials that were suited to, and enhanced, smart teaching and learning. The courses also assisted them in: selecting appropriate lesson content; utilizing appropriate evaluation methods; carrying out self-evaluation of the effectiveness of their teaching; selecting appropriate teaching activities; enhancing learner mastery of the topics taught; developing questions of various cognitive levels to assess learner ability and achievement. The courses also enabled the teachers to develop their learner' study skills as well as their mastery of critical and creative thinking skills. However, these courses were only moderately successful in enhancing the teachers' mastery of information technology skills and their ability to assess learner personality and values.

The 14-week INSET Course for the Training of Smart School Teachers and In-house Courses in Smart Schools also succeeded in equipping teachers with the skills required to implement smart teaching and learning. The courses enabled teachers to master the generic skills and enabled them to infuse these generic skills in smart instructional activities. The teachers reported that they were able to develop smart instructional packages; utilize technological aids in smart teaching – learning procedures; implement smart school instructional strategies; and master the skills of facilitating learning. The courses enabled teachers to develop a clear understanding of the concept of Smart

Schools; enhance their knowledge of, and skills in, smart instructional practices; and, enabled them to accommodate the paradigm shift and changes in the curriculum mandated by the introduction of Smart Schools. It is clear that the courses succeeded in assisting teachers in acquiring new knowledge and skills; developing existing understandings; and enhancing existing skills as well as generating an interest in smart instruction among the teachers themselves.

This study also investigated the extent to which teachers were able to apply in the classroom the knowledge and skills that they had acquired from the 14-week INSET Course for the Training of Smart School Teachers and In-house Courses in Smart Schools. The data indicated that these courses were only moderately successful in enabling teachers to do this. A large proportion of the lessons that the teachers conducted were learner-centered. Slightly less than half of the teachers (49.3%) were able to infuse critical and creative thinking skills into their lessons. A large proportion of teachers were also only able to implement a small portion of the national assessment system in the Smart Schools. Only 43.1% of the respondents were able to carry out formative assessment of learner progress using the various available techniques. Only 43.4% of the respondents were able to develop a limited number of smart instructional packages. As well, 48.5% of the respondents indicated that they were only able to utilize a small proportion of the available technological aids. Also, 43.2% of teachers indicated that they were able to infuse only a small proportion of the higher order thinking skills in their teaching. Less than half of all the respondents were able to infuse moral values, function

as facilitators of learning, inculcate study skills among learners, and infuse Malay language skills in smart instruction.

In implementing smart instruction in schools, a large proportion of the respondents reported adequate supervision by: the Senior Assistant responsible for Student Affairs (74.7%), the Senior Assistant responsible for the Curriculum (75.6%), and Teacher Training College lecturers (81.4%). Between 1 and 3 in-class observations were made by the Headmaster / Principal (23.9%), the Senior Assistant (25.7%), the Subject Head (41.3%), colleagues (33.7%), Teacher Education Division officers (24.6%), Teacher Training College lecturers (24.7%), State Education Department officers (19.3%), the District Education Officer (9.9%), Divisional Education Officers (Sabah and Sarawak only) (7.3%) and officers from the School Inspectorate (18.6%).

The study also provided insights into the constraints that impeded teachers in applying the knowledge and skills that they had acquired from the courses in their respective schools. Among the constraints reported by teachers were their workload (84.9%); inadequate financial allocations (80.9%); exam pressures (87.6%); time constraints (84.8%); the demands of the syllabus (84.3%); their own shortcomings (76.1%); inadequate support from the school administration (71.8%); lack of equipment and facilities (79.2%); conflicting directives from top management (77.6%); learner factors (68.8%); inadequate cooperation from colleagues (66.3%); and, lack of support from the District Education Officer (54.5%).

The findings of the study also allowed for the identification of several factors that impacted on the teachers' implementation of the Smart Learning concept and the related instructional strategies in their respective schools. The workload shouldered by the teachers was reported by the highest percentage of respondents (65.2%) as hindering their implementation of the programme. This was followed by the lack of appropriate software (64.2%); difficulty in developing instructional packages (61.8%); and inadequate information technology equipment and facilities (53.5%). Only a small percentage of teachers reported other factors as impacting negatively on their implementation of smart learning. These factors included the Smart School curriculum (38.8%); learner performance (38.8%); teachers' knowledge of, and skills in utilizing technological aids for smart instruction (33.6%); learners' willingness and ability to engage in smart teaching and learning activities (33.5%); acknowledgement and validation of the teachers' roles and support from the school administration (32.6%); learners' study skills (30.7%); teachers' knowledge of, and expertise in generic skills (24.3%); monitoring by the school authorities (24.1%); teachers' knowledge of, and expertise in applying the Smart School concept (21.6%); teachers' confidence in providing smart instruction (20.6%); teachers' knowledge of, and expertise in, functioning as facilitators of learning (19.6%); and finally, knowledge of, and expertise in, critical and creative thinking skills (17.1%).

As a whole, the findings indicated that 82.8% of the respondents were able to apply the knowledge and skills that they had acquired from the Smart School courses.

While the findings above indicated that teachers encountered a number of constraints in their efforts to implement the Smart School programme in their respective schools, there were also a number of factors that motivated the teachers to persist in applying the knowledge and skills that they had acquired from the Smart School courses. The following factors, arranged according to frequency, influenced the teachers.

- The most important factor that motivated the teachers to persist in applying the knowledge and skills that they had acquired from the Smart School courses was their desire to develop their knowledge and skills (84.3%).

- Teachers' desire to make effective use of the knowledge that they had acquired (84.1%).

- Teachers felt that it was their duty and responsibility to transfer the knowledge and skills that they had acquired (82.9%).

- Teachers' desire to share their knowledge (81.5%).

- Rising to the challenge of discharging their duties (77.7%).

- The school culture (77.5%).

- The relevance of the knowledge that they had acquired to the subject that they taught (77.9%).

- The School leadership (76.9%).

- Teachers' satisfaction in successfully discharging their responsibilities (76.2%).

- Teachers' mastery of the course content (72.0%).

- Teachers role as resource persons (67.2%); and,

- Teachers' satisfaction with their present jobs (67.1%).

The study also examined the extent to which teachers were able to transfer the knowledge and skills that they had acquired from the 14-week INSET Course for the Training of Smart School Teachers to other teachers, as well as the frequency of this training, the problems that were encountered and the factors that influenced the teachers. 84.4% of the respondents reported that the sponsors of the course (The Teacher Education Division) had directed them to share the knowledge and skills that they had acquired from the course. Additionally, almost all the respondents (92.9%) reported that they had been directed by the school administration to conduct In-house Training in order to share their knowledge of, and expertise in, smart instruction with other teachers in the school. The findings indicated that teachers conducting courses at the school level were more likely to provide personal guidance to other teachers than were those teachers who conducted courses at the district, or state levels, or even in other schools. Also, a large proportion of the respondents indicated that they had a high level of mastery of smart instruction. Consequently, it was found that 69.1% of the respondents were confident that they could conduct courses for other teachers in their school. However, teachers were less confident in conducting courses at the district, or state levels, or even in Teacher Resource Centers. Also, 77.8% of the respondents reported that they had the opportunity to teach the subject for which they had attended the 14-week INSET Course for the Training of Smart School Teachers.

A large proportion of the respondents indicated that recognition of their roles; monitoring by the relevant authorities; action plans for in-house training; satisfaction; leave facilities;

lecture fees; requests from Subject Head; opportunities to further their studies; and, the annual performance assessments were factors that impacted on their decision to transfer the knowledge and skills that they had acquired from the 14-week INSET Course for the Training of Smart School Teachers. As well, factors such as course materials; software; information technology equipment and facilities; and, their workload also influenced their willingness to conduct in-house course for other teachers.

This study attempted to obtain the respondents' perceptions pertaining to the problems in implementing the Smart School concept and smart instructional strategies in their respective schools in terms of the teachers, learners, equipment/facilities and management.

Problems relating to the teacher factor included workload, confidence in providing smart instruction, knowledge of, and skills related to Smart Learning concepts, facilitating skills, knowledge of and skills in providing instruction in critical and creative thinking, knowledge of generic skills, and competence in utilizing technological aids. All of these factors impacted negatively on the teachers' implementation of smart instruction in their respective schools.

Problems relating to the learner factor included weaknesses in learners' preparedness and ability to participate in smart instruction, lack of study skills and unsatisfactory learner performance.

Problems related to the equipment and curriculum included the lack of suitable software, difficulty in implementing the Smart School curriculum, weaknesses in the Smart School curriculum, inadequate information technology facilities and equipment, and difficulties in developing instructional packages.

The main problems relating to the management of the programme identified by the respondents were monitoring by upper-level management, as well as recognition of, and support for their roles.

Nonetheless, 90.8% of the respondents attempted to apply the knowledge and skills that they had acquired from the 14-week INSET Course for the Training of Smart School Teachers.

The following factors motivated the respondents to persist in applying the knowledge and skills that they had acquired from the 14-week INSET Course for the Training of Smart School Teachers.

I. Teacher factors

- Interest in enhancing their knowledge / skills

- Their role as a resource person consulted by their colleagues

- Sense of duty in transferring the knowledge and skills they had acquired

- Satisfaction in performing their job

- Meeting and overcoming the challenges arising from their duties and responsibilities

- Sense of gratification in performing their duties, and

- The desire to share knowledge

II. School culture and leadership

III. Mastery of the course content.

The study also investigated the extent to which the 14-week INSET Course for the Training of Smart School Teachers succeeded in enhancing participants' knowledge of, and expertise in the basic smart learning concepts, planning smart instruction, smart instructional processes, managing smart classrooms, and assessment and evaluation of smart learning.

For this purpose, the research team used the following scale to interpret the mean scores.

Mean Score	Interpretation
1.0 to less than 1.8	Did not assist at all
1.8 to less than 2.6	Did not assist
2.6 to less than 3.4	Assisted to some degree
3.4 to less than 4.2	Assisted
4.2 to 5.0	Assisted a lot

Table 2 shows the respondents' perceptions of the effectiveness of the 14-week INSET Course for the Training of Smart School Teachers in enhancing their knowledge and

expertise in five domains of smart instruction, that is, key smart learning concepts, planning smart instruction, smart instructional procedures, management of smart classrooms, and assessment and evaluation of smart learning. Using the interpretation of the mean scores described above, it was found that the 14-week INSET Course for the Training of Smart School Teachers as well as the In-house Courses assisted greatly in enhancing the knowledge and expertise of the respondents. The mean scores for the five domains of smart instruction, that is, key smart learning concepts, planning smart instruction, smart instructional procedures, management of smart classrooms, and assessment and evaluation of smart learning were 3.70, 3.75, 3.84, 3.82 and 3.66 respectively.

Table 2

Effectiveness of the 14-week INSET Course for the Training of Smart School Teachers

No.	Aspects	DNAAL	ATSD	A	Total	Mean	S.D.
1.	The 14-Week INSET Course and In-House Courses assist to enhance the knowledge and expertise in **smart learning concept**	26 (2.9)	352 (39.9)	504 (57.1)	882 (100.0)	3.7005	.6019
2.	The 14-Week INSET Course and In-House Courses	32 (3.6)	264 (29.9)	586 (66.4)	882 (100.0)	3.7546	.6509

	assist to enhance the knowledge and expertise in **planning smart instruction.**					
3.	The 14-Week INSET Course and In-House Courses assist to enhance the knowledge and expertise in **the smart instructional procedures**.	18 (2.0)	283 (32.1)	581 (65.9)	882 (100.0)	3.8437	.5824
4.	The 14-Week INSET Course and In-House Courses assist to enhance the knowledge and expertise in **the management of smart classrooms**	27 (3.1)	227 (25.7)	628 (71.2)	882 (100.0)	3.8250	.6042
5.	The 14-Week INSET Course and In-House Courses assist to enhance the knowledge and expertise in **the assessment and evaluation of**	26 (2.9)	341 (38.7)	515 (58.4)	882 (100.0)	3.6640	.5789

	smart learning.						

KEY: **DNAAL= Did not assist at all**   **A= Assisted**

ATSD= Assisted to some degree   **S.D. =Standard Deviation**

The study also attempted to determine if there were differences in the effectiveness of the 14-week INSET Course for the Training of Smart School Teachers and the In-house Courses in developing the participants' knowledge of, and expertise in the five domains of smart instruction.

Table 3 compares the effectiveness of the 14-week INSET Course for the Training of Smart School Teachers and the In-house Courses in enhancing the respondents' knowledge of, and expertise in the five domains of smart instruction. In the case of the 14-week INSET Course for the Training of Smart School Teachers, mean scores of 3.85, 3.84, 3.93, 3.92 and 3.73 respectively were obtained for the five domains of key smart learning concepts, planning smart instruction, smart instructional procedures, management of smart classrooms, and assessment and evaluation of smart learning. All of these mean scores were **higher** than those obtained by the participants of the In-house Courses, that is, 3.57, 3.68, 3.77, 3.74 and 3.60 respectively.

Using the table for the Interpretation of the Mean Scores above, the mean scores for the 14-week INSET Course for the Training of Smart School Teachers as well as the In-house Courses indicate that both courses were very effective in developing the participants' knowledge of, and expertise in the five domains of smart instruction.

Table 3

Comparison of the Effectiveness of the 14-week INSET Course and the In-house Course

No.	Aspects	Smart School Courses	N	Mean	S.D.	df	t-value	P
1.	The 14-Week INSET Course and In-House Courses assist to enhance the knowledge and expertise in **smart learning concept/.**	14-Weeks INSET	411	3.8511	.5557	880	7.139	.000
		In-House	471	3.5690	.6103		7.185	
2.	The 14-Week INSET Course and In-House Courses assist to enhance the knowledge and expertise in **planning smart instruction.**	14-Weeks INSET	411	3.8362	.6088	880	3.499	.000
		In_house	471	3.6834	.6782		3.525	
3.	The 14-Week INSET Course and In-House Courses assist to enhance the knowledge and expertise in **smart instructional procedures.**	14-Weeks INSET	411	3.9300	.5391	880	4.147	.000
		In-House	471	3.7684	.6084		4.181	

			N		S.D.	df		p
4.	The 14-Week INSET Course and In-House Courses assist to enhance the knowledge and expertise in **the management of smart classrooms.**	14-Weeks INSET In-House	411 471	3.9213 3.7410	.5526 .6346	880	4.470 4.512	.000
5.	The 14-Week INSET Course and In-House Courses assist to enhance the knowledge and expertise in **the assessment and evaluation of smart learning.**	14-Weeks INSET In-House	411 471	3.7301 3.6062	.5501 .5975	880	3.187 3.205	.001

KEY: N=Frequency   df=Degree of Freedom   p=probability (two-tail)

S.D.= Standard Deviation

Questionnaire for Learners

The study also investigated the impact of smart instruction on the students of all 70 Smart Schools.

As stated earlier, a total of 2689 students who had undergone smart school instruction were surveyed. They comprised 853 (31.7%) Form One students, 1270 (47.2%) Form Two students, 392 (14.6%) Form Four students and 175 (6.5%) Form Five students. The

total number of respondents comprised 1255 (46.7%) males and 1434 (53.3%) females. The racial breakdown of the respondents indicated that there were 2269 (84.4%) Malays, 207 (7.7%) Chinese, 32 (1.2%) Indians and 181 (6.7%) students of other ethnic origin.

The first domain that the respondents were required to respond to was their rating of **teachers' use of smart school teaching and learning strategies**. The data showed that 2490 (95.6%) students indicated that their teachers actively involved the students in the lessons. 2537 (94.3%) of the students reported that the instruction that their teachers provided required them to think, while 1912 (71.1%) indicated that they were required to engage in the higher order thinking skills. 2274 students (84.6%)also reported that their teachers infused moral values in their instruction. Students (2503 students, 93.1%) also indicated that their teachers were able to facilitate learning. Smart School teachers were also able to impart study skills through their teaching (2153 students, 79.7%). A total of 1838 students reported that their teachers emphasized Malay language skills in their teaching. Another 2229 students (82.9%) indicated that Smart School teachers emphasized continuing education using a variety of techniques. Also, 2091 students (77.8%) reported that teachers implemented the Smart School curriculum in their instruction. Teachers also succeeded in explaining new content effectively and in pitching their instruction to the ability of the learners as well as creating classroom environments that facilitated active learning.

The second domain to which the students responded was the **smart school instructional materials that their teachers utilized**. The data revealed that 2110 students (78.4%)

reported that their teachers utilized new and innovative instructional materials including using computers for instruction (1458 students, 54.2%), instructional materials (2123 students, 54.2%), various types of instructional aids (1979 students, 73.6%) and instructional software (1933 students, 71.9%). These findings show that the smart school teachers utilized a variety of resources when providing smart instruction.

The third domain was **the management of smart school classrooms**. The findings indicated that 2399 students (89.2%) reported that teachers had succeeded in enhancing learner participation in the instructional process. 2425 student (91.1%) reported that teachers provided them with opportunities to express their views and opinions in the classroom. 2143 students (79.9%) reported that teachers had succeeded in arousing the interest of the learners in the instructional process. Smart school teachers also succeeded in instilling discipline among learners (2113 students, 78.6%). 2128 students (79.1%) reported that teachers had succeeded in motivating the learners to learn. Consequently, effective use was made of the time available for instruction (2183 students, 81.1%). 2416 students (89.9%) perceived that teacher – student and student – student relationships were good. The findings of this study confirm that teachers were able to manage smart classrooms effectively.

The fourth domain was the **assessment and evaluation of smart instruction**. The data obtained indicated that 2446 students (91.0%) reported that teachers assessed student learning during each instructional episode. 2359 students (87.7%) reported that teachers reinforced learning. Only 1933 students (71.5%) reported that teachers conducted

teaching activities. 2093 students (74.1%) reported that teachers conducted enrichment activities. Teachers also provided opportunities to learners to assess their peers (1649 students, 71.3%). As a whole, the learners' perceptions were that teachers were effective in carrying out assessment and evaluation of smart learning.

The fifth domain pertained to the respondents' **perceptions of the Internet**. The data indicated that 2603 students (96.5%) viewed the Internet as an effective communication tool. Only 888 students (33.0%) had been taught to surf the Internet by their teachers. 1470 students (54.6%) learnt to surf the Internet from their peers. Another 1299 students (48.3%) were self-taught. Of the 2689 respondents of the study, only 1149 students (42.7%) had access to the Internet at home. 1448 students (53.9%) reported that they used the Internet to access information. 1451 students (53.9%) were confident that their teachers were proficient in surfing the Internet. 2211 students (82.2%) were of the view that materials accessed from the Internet were appropriate for smart instruction. 1711 students (63.7%) believed that materials accessed from the Internet aided them in revising outside class hours. These findings indicate that learners had a high degree of confidence in the use of the Internet in smart instruction.

The sixth domain that was investigated was **smart instruction**. The data indicated that 1896 students (70.5%) believed that smart instruction saved time. 1829 students (58.0%) indicated that the use of multimedia assisted them in understanding specific lesson content more quickly. As well, 2069 students (76.9%) reported that smart instruction was enjoyable.

In order to investigate the differences, if any, in the level of acceptance of smart instruction by male and female respondents in the six domains, the research team compared the mean scores in each domain to determine the impact on male and female students. Mean scores between 4 and 5 were regarded as having a 'High' impact, scores between 3 and 3.99 were regarded as having a "Moderate' impact, while mean scores between 1 and 2.99 were considered to have a 'Low' impact. The maximum possible mean score was 5.

Table 4

Differences in the Level of Acceptance of Smart Instruction
Between Male and Female Students

ASPECTS	SEX	N	MEAN	S.D.
Smart School Teaching And Learning Strategies	Male	1255	4.2013	.4760
	Female	1434	4.2169	.5053
Smart School Instructional Materials	Male	1255	3.9120	.7743
	Female	1434	3.8635	.7901
The Management Of Smart School Classrooms	Male	1255	4.2402	.6108
	Female	1434	4.2705	.6113
The Assessment And Evaluation Of Smart Instruction	Malre	1255	3.9989	.5916
	Female	1434	4.0271	.6145
Perceptions Of The	Male	1255	3.6095	.6175

INTERNET	Female	1434	3.6066	.6154
Smart Instruction	Male	1255	4.0494	.8327
	Female	1434	4.0437	.8031

KEY: N=Frequency   S.D.=Standard Deviation

The data indicated that male respondents obtained higher mean scores than female respondents. However, when viewed holistically, the level of acceptance of smart instruction by both male and female respondents varied from 'Moderate' to 'High'.

DISCUSSION

The study involved 882 Smart School teachers and 2689 students in 70 Smart Schools throughout Malaysia. The findings of the study show that Smart School teachers acquired a diverse range of knowledge and skills related to smart instruction from the 14-week INSET Course for the Training of Smart Schools Teachers and from In-house Courses. These teachers reported that they had succeeded in mastering various aspects of the concept of smart instruction, planning smart teaching, managing smart instruction, and managing the smart classroom. They had not, however, fully mastered the national-level Smart School assessment and evaluation system. Nonetheless, it is clear that the 14-week INSET Course for the Training of Smart Schools Teachers and In-house Courses were at least **moderately** successful in assisting teachers in applying in the classroom the knowledge and skills that they had acquired from the courses. Weaknesses were revealed in the following aspects: training skills, assessment and evaluation of smart learning; selection and use of software; the generic skills, particularly in infusing

higher order critical and creative thinking skills; planning and preparing learning packages; information technology skills; and implementation of the smart school curriculum in the school. This indicates a need for strong support, and on-going guidance as well as monitoring by the relevant authorities.

There were also a number of constraining factors that impacted on the teachers' ability to implement smart instruction in their respective schools. Among these factors were their workload, insufficient financial resources, examination pressures, time constraints, demands of the syllabuses, their own ability, conflicting instructions / direction from the higher authorities, learner factors, the cooperation of their peers, and support from the school authorities. Smart School teachers also encountered problems relating to software, planning and preparation of instructional packages, and inadequate information technology facilities and equipment. These findings are consistent with the findings of the studies by Lee Lai Guan et. al. (2000) and Siti Suria Salim (2001).

While teachers were constrained in their implementation of the Smart School programme by the factors discussed above, there were other factors that motivated them to persist in applying and utilizing the knowledge and skills that they had acquired from the Smart School courses that they had attended. Teachers showed a high degree of interest, a willingness to apply the knowledge that they had acquired, an ability to confront challenges and expressed satisfaction in discharging their duties and responsibilities.

A total of 69.1% of the teachers reported a high degree of confidence in providing training to their peers in their own school but were less confident in providing training to teachers either in the Teacher Resource Center, or at the district or state levels.

On the whole, the 14-week INSET Course for the Training of Smart Schools Teachers and In-house Courses succeeded in enhancing the teachers' knowledge of, and skills in providing smart instruction. The 14-week INSET Course for the Training of Smart Schools Teachers was perceived to be more effective in training smart school teachers than the In-house courses.

Smart School learners had a positive view of, and were receptive to Smart School instruction. They had a positive view of the teaching and learning strategies used by smart school teachers, the instructional materials used by smart school teachers, teachers' management of smart classrooms, smart school assessment and evaluation, the use of the Internet in instruction, and smart school instruction. Nonetheless only 33.0% of the students learnt about the Internet from their teachers. As well, only 42.7% of students had Internet facilities in their home, and most had learnt to surf the Internet either from their friends or on their own. Male respondents had higher mean scores than female students in their acceptance of smart teaching and learning. On the whole, smart school instruction has had a moderate to high impact on smart school learners.

RECOMMENDATIONS

The findings of this study revealed a number of the strengths and weaknesses of the 14-week INSET Course for the Training of Smart Schools Teachers and In-house Courses. The research team offers the following recommendations to enhance the planning and implementation of the Smart School programme in Malaysia.

(a) The curriculum for the 14-week INSET Course for the Training of Smart Schools Teachers and In-house Courses, which is developed and implemented by the Teacher Education Division, must be reviewed so that course participants benefit from the courses and develop the confidence necessary to implement the smart school curriculum. The following aspects need to be improved and given added attention:

- A 'training for trainers' component should be included to ensure that teachers possess the requisite knowledge and skills to enable them to develop training courses at the school, district and state levels. At the very least, they should be able to conduct In-house Courses at the school level more effectively.

- As for the assessment and evaluation of smart learning, it is necessary for teachers to be proficient in constructing questions for the various levels of difficulty and to assess formative learner progress using a variety of methods.

- Emphasis on knowledge and skills that will allow them to select and use software that can be utilized in smart instructional activities.

- Generic skills, especially the infusion of higher order critical and creative thinking skills.

- Planning and developing instructional packages

- Information technology courses

- Implementation of the Smart School curriculum in instruction in schools.

- Necessity of developing a mentoring system at the school level that offers continuing guidance and advice to teachers after the completion of their course.

(b) It is necessary that the course lecturers be very well trained in order to ensure the effectiveness of the 14-week INSET Course for Training Smart School Teachers conducted by the teacher training colleges.

(c) A monitoring and mentoring system involving the Ministry of Education, the School Inspectorate, the State Education Departments, District Education Offices, principals, senior assistants, master teachers and senior subject teachers must be set in place. This monitoring and mentoring is important to assure quality in the implementation of the Smart School programme at the school level. Without this monitoring and mentoring, it is unlikely that the Smart School programme will achieve the desired objectives.

Additionally, it is also necessary for the lecturers at teacher training colleges to offer continuing guidance to teachers in the Smart Schools.

(d) After the completion of the 14-week INSET Course for Training Smart School Teachers, participants should be capable of developing instructional packages for the subject(s) that they are teaching in their schools. A programme to plan and develop instructional packages at the school level must be devised and must have the backing and support of the school principal. Schools should not depend on the software that is still not forthcoming from the Educational Technology Division of the Ministry of Education. Waiting for this software will result in a waste of time and disrupt the implementation of the Smart School programme.

(e) Up to December 1998 only 30% of all the lecturers from the teacher training colleges in Malaysia were computer literate (Mohammed Sani, 1999). It is recommended that all lecturers should be trained in smart instructional techniques and that all of them should be involved in the training of teachers from schools that are adjacent to their respective colleges. Instead of being limited to the four core subjects (English language, Malay language, Mathematics and Science), all teachers should be provided training so that the process of infusing smart instructional elements can be hastened.

(f) Lecturers and teachers who have experience in smart instruction need to be encouraged to involve themselves directly in investigating and writing about smart instructional pedagogy. There is an immediate as well as a future need for new

approaches and ideas for all subjects that have been proven to be pedagogically effective. Articles and research findings can be disseminated through journals, books and educational seminars that should be organized on a regular basis.

(g) Presently, only teacher training colleges have been given the responsibility of conducting courses for training Smart School teachers. It should be made compulsory for all Education Faculties in all the local universities to conduct such courses for their undergraduates.

(h) Consistent with the desire of the Ministry of Education to infuse smart instructional practices in all schools, it is necessary that senior assistants, subject heads, and master teachers be trained and be proficient in information technology and smart instructional strategies for their respective subject specilizations so that they can offer continuous monitoring, guidance and counselling services that are systemic and effective to the smart school teachers under their charge. This study has revealed serious deficiencies in these aspects in the management of Smart Schools.

(i) All school administrators (principals / headmasters) must be provided with courses in effective management of Smart Schools. Their mindsets need to be focused on developing their respective schools into effective Smart Schools in as short a duration as possible so that their students are prepared to confront the challenges of the onrushing technological era.

(j) The ministry of Education must provide all the required infrastructure facilities, equipment and software that is necessary for smart instruction to be provided to our students.

CONCLUSION

The findings that are reported in this paper provide some indications of the effectiveness of the 14-week INSET Course for the Training of Smart Schools Teachers and In-house Courses, and also indicate their impact on the type of smart instruction provide in the Smart Schools.

The findings indicate the necessity for a series of strategic measures to be carried out by the Ministry of Education and all the other agencies that are involved in order to ensure the more effective implementation of the Smart School programme. The process of converting all schools into smart schools requires effective planning in all related aspects and also requires a high degree of commitment among all individuals and agencies involved, including the Ministry of Education, Malaysia.

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HUMAN RESOURCE DEVELOPMENT FOR SUSTAINABLE DEVELOPMENT IN THE NEW ECONOMY

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Malaysia

ABSTRACT

Human resource has been recognized as one of the contributing factors for economic growth and for social and political and technological development of many nations. In the era of globalization, economic liberation and fast growing ICT architecture and infrastructure , it is realized that strengthening the national competitive advantage is the main concern of the policy makers. For the newly emerging, newly industrialized and fast growing economy like Malaysia, the human resource development policy is found to be an important agenda in the national master plan of the country. Issues relating to demand and supply of skilled labour, enhancement of workers' positive values, provision of relevant human resource training and education, creation of thinking and creative society and improvement of ICT literacy rates are imperatives for economic growth and sustainable development in the competitive environment of the New Economy. Subsequently, various human resource development planning and strategies are formulated and action plan are outlined at various phases of development. In the case of Malaysia, the rapid development of ICT architecture and infrastructure, the growing e-commerce activities, the strategic move to high –tech based industries, the rapid progress of MSC and improvement in science, technology and research capabilities are "drivers" of the knowledge-based economy. Against these background, this paper analyses the human resource policy thrusts for economic growth and sustainable development in Malaysia

INTRODUCTION

In the New Economy, we foresee changes in our all works of life. This is mainly due to changing economic, social, political and technology environment facing by the nation. In economic environment, issues relating to opportunity and threats of globalization, liberalization, WTO, AFTA and k-economy are deliberated at numerous meetings and dialogues. At the societal level, changes in values, work attitude and life styles, skill and educational requirement, changing demographic patterns of the work force increase complexity. At the same time, the political stability, the legislations, business rules and regulations, human rights and environmental policies in each nation and region are carefully analyzed by the investors to ensure their economic objectives are achieved. In the area of technology, the rapid development of ICT architecture and infrastructure contributes to the economic and business growth and social development. Malaysia is the case in point.

In Malaysia, the k-economy sees the government, the private sector and the societal interests, concerns and reaction to the development of information technology and telecommunication. The Malaysian Multimedia Super Corridor (MSC) which is stretching to year 2020 is facilitated by the Multimedia Development Corporation (MDC) which also grants MSC status to ICT companies. The MSC area is from the world's tallest twin towers at the Kuala Lumpur City Center in the north to the new Kuala Lumpur International airport in the south. Two new intelligent cities, Putrajaya and Cyberjaya are already in the MSC area, measuring 15 km wide and 50 km long. . The seven flagship applications in the MSC currently developed by the international and domestic companies are: electronic government, multi-purpose Smart Card, Smart Schools, telemedicine, R &D clusters, world wide manufacturing web and borderless

marketing. The National IT Council (NITC) has identified five strategic programs for fostering an e-government environment. Grants are provided to applicants to develop the networks which enhance these five areas: E-Public Service, E-Community, E-Economy, E-Learning , E-Sovereignty.

EMPOYMENT GROWTH AND DEVELOPMENT (year 2001-2005)

The economic growth and rapid industrial development has made Malaysia as one of the most open economies in the world. The last 30 years had seen the growth of industry particularly in the manufacturing sector plays a central role in the Malaysia's industrialization process. During the Fifth Malaysia Plan (1986-1990), the Industrial Master Plan (IMP) was launched, and the manufacturing sector was reorganized from a domestic-oriented sector to one export oriented.

The New Development Policy (NDP), (the latter replacing the New Economic Policy (NEP) sets a pace for the country to become a fully developed economy by the year 2020. The NDP maintained the basic strategies of the NEP, but with a new dimension.   The strategies were to: (a) focus more on eradication of hardcore poverty while at the same time reducing relative poverty, (b) focus on employment and rapid development of an active Bumiputera Commercial and Industrial Community (BCIC), as a more effective strategy to increase the meaningful participation of Bumiputera in the modern sectors of the economy, (c) rely more on the private sector to be involved in the restructuring objectives by creating greater opportunities for its growth, and (d) focus on

human resource development as a fundamental requirement for achieving the objectives of growth and distribution

In Malaysia, the two crucial issues with the quality of manpower are labour productivity and national competitiveness. The situation has prompted the government as well as the investors to turn to capital intensive projects and in turn creates a high demand for trained and skill workforce in science and technology, in particular. Hence human resource development is vital to the country's economic, industrial and technological development. The field of industrial relations is being called upon to give its best because the new millennium is predicted to be led by information and communication technology (ICT) and the role of human resource remains central. The impact of labour market and unions on general management and on human resource management practices remains crucial in the fast growing economy like Malaysia. As such, the industrial harmony through tripartite arrangement and dialogues between the government (Ministry of Human Resources) , Malaysian Employer Federation (MEF) and Malaysian Trade Union Congress (MTUC) in solving various employment issues remains important in Malaysian economy.

Table 1 and Table 2 show Malaysia labour force and employment rate from 1900-2000 . The government has and will continue to undertake the necessary measures to increase significantly the supply of skilled and semi-skilled human resources and in the Eighth Malaysian Plan (1996-2000),

Table 1

Labor Force and Employment Rate, 1990 - 2000 ('000 persons)

	1990	1995	2000	Average Annual Growth	
				6MP	7MP
Total Labor Force	7,042	8,140	9,327.1	2.9%	2.8%
Local	6,752	7,490	8,546.1	2.1%	2.7%
Foreign	290	650	781	17.5%	3.7%
Unemployment Rate	356	224.6	260.9		
Employment Rate				3.4%	2.8%

Source : Seventh Malaysian Plan (1996-2000)

Table 2

Labour Force and Employment, 2001-2005 ('000 persons)

	2000	2005		Average Annual Growth	
				7MP	8MP
Total Labor Force	9572.5	11161.9		3%	3.1%
Local	8823.3	10591.9		3.6%	3.7%
Foreign	749.2	570		-2.6%	-5. 3%
Unemployment Rate	356	224.6			
Employment Rate	3.1	2.7			

Source : Eighth Malaysian Plan (2001-2005)

In the 8MP, the total employment by selected occupation (1995-2005) is shown in Table 4

Table 3
Employment by Selected Occupation, 2000-2005 (Persons)

8MP			
	Stock 2000	Employment 2005	Net Increase
Engineers	55,485	108,400	52,915
Engineering Assistants	130,024	247,739	117,715
Medical Health Professionals	21,270	36,835	15,565
Allied Health Professionals	45,052	115,821	70,769
School teachers	298,083	349,086	51,003

It has been reported that the manufacturing sector greater capital and knowledge intensity in order to overcome labour shortage. The manufacturing is expected to create 642,000 new jobs or 40.4 percent of the job created. The employment in the manufacturing sector is expected to amount to 29.5 percent of total employment by end of Eighth Malaysia Plan (2001-2005). The service sector is expected to grow at an average rate of 3.8% per annum. The administrative and managerial category will continue to grow at an average rate of 6.9 percent during the plan (see Table 4). The productivity grew at an average of 1.6% contributed by the shift towards high technology production processes and increase in labour efficiency

Table 4

Employment Growth rate

Sector	Average Employment Growth rate per annum during 8MP (2001-2005)
Manufacturing Sector	4.6%
Service Sector	3.8%
Administrative & Managerial	6.9%
Production workers	2.0% (during the 8MP period)
Agricultural Workers	2.0% (during the 8MP period)
Service workers (tourism, hospitality, ICT, transportation	4.25 per annum.

HUMAN RESOURCE POLICY THRUST

Thus human resource development has emerged as the crucial driving force towards realizing the goals of Vision 2020. Malaysia is not only need to acquire skills and knowledge but the workers also need to be instilled with correct work attitudes and ethics. A disciplined, efficient and skilful workforce will no doubt lead to increased productivity and ensure that our economic development is both resilient and sustainable in the long term. Table 4 shows 10 human resource policy thrust in Eighth Malaysia Plan (2001-2005).

Table 4

Human Resource Development Policy Thrusts in
8th Malaysia Plan (2001-2005)

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10 HUMAN RESOURCE POLICY THRUSTS:

1.   Supply of skilled labour

2.   Quality of training and education

3.   Improvement on training and education delivery systems

4.   Promoting Life-long learning

5.   Optimizing local labour

6.   Increasing supply of science and technology workforce

7.   Accelerating productivity-based wage system

8.   Strengthening human resource information systems for labour
       mobility

9.   Promote Malaysia as regional education center of excellence

10.   Reinforcing positive value

DISCUSSION AND CONCLUSION

Malaysia is moving forward to achieve the industrialized nation by year 2020. Continuous economic, social, technological and business strategies   had been long formulated and implemented in the Malaysian Master Plans . Human resource and technological development, product innovation, industrial competitiveness, effective management practices and efficient government are crucial factors that are given priority and greater attention. Better learning environment for students and utilization of ICT in schools, virtual (web-based training), upgrading teaching skills and improved

compensation systems for teachers are also considered. In the quest to attain the status of a "developed nation" by the year 2020, greater emphasis is given to the retraining and skills upgrading of the workforce through various apprenticeship, vocational, technical and functional skills training programs offered by the private and public training institutions. The HRDF will further expand to include, energy, agriculture and other services such as hospital, transportation and water supply.

All in all, the K-Economy and globalization sees the government, the private sector and the societal interests, concerns and reaction to the development of information technology and telecommunication. The output from development and use of new production technology, the speedy utilization of information technology and telecommunication, the formation of technical skilled workers and managerial skill professionals can be measured in terms of increased efficiency and productivity in the governmental systems, in the manufacturing, engineering and process industries and as well as in the financial and other service-related industries.

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FACULTY, STUDENTS', AND EMPLOYERS' PERCEPTIONS OF THE CHARACTERISTICS OF THAI PRIVATE COLLEGE STUDENTS

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ABSTRACT

The purpose of the study was to determine whether three stakeholder groups—faculty, students, and employers—had the same or different perceptions of three stakeholder groups of the characteristics of private college students in Thailand. Specifically, this study was designed to examine the perceptions of regarding the relative importance and the degree to which college students in management programs possessed of academic knowledge, school and work ethics, student intention, and extracurricular activities. All 402 respondents (35 faculty members, 351 senior students, and 16 employers) associated with six private college and universities were asked to rate items on a 5-point Likert scale of questionnaires and then to write comments in sections devoted to open-ended questions.

The findings in this study revealed a general consensus exists among the three groups: faculty members, college students and employers. All three respondent groups had positive perceptions of the quality of Thai private college graduates. Indeed, employers are more positive overall in their evaluations of private college graduates than either the college students themselves or their faculty members.

Regarding the ranking of the four key characteristics in this study (academic knowledge, school and work ethics, student intention, and extracurricular activities), all the three respondent groups ranked extracurricular activities as "least important."

Faculty ranked school and work ethics as the most important, while students and employers ranked student intention as most important. The students had perceptions more closely aligned to employers than to their faculty. Their similar perceptions are shown in both numerical responses (i.e. means scores, ranking) and findings from open-ended questions. One exception is academic knowledge where faculty had closer mean scores to their students.

Using ANOVA, size of the college (small, medium, or large) showed greater differences than those found for respondent type (faculty, students, or employers). Nevertheless, the differences in perceptions among respondent types and among respondents at the three sizes of colleges were small.

The employers perceived overall work-related competencies of graduates in average to excellent level. They viewed graduates to be well prepared to work in high percentages compared to those rating students not well prepared to work.

Introduction

This paper aims to present the findings whether three stakeholder groups—faculty, students, and employers—had the same or different perceptions of the characteristics of private college students in Thailand.

Specifically, this study was designed to examine the perceptions of faculty, students, and employers regarding the relative importance of four key characteristics: academic knowledge, school and work ethics, student intention, and extracurricular activities and the degree to which college students in management programs possessed each of these perceived characteristics.

Background of the characteristics of Thai graduates

During the past decade, government officials and educators have come to realize the importance of Thai educational reform and have become seriously involved. Many seminars have been held in the country to discuss the quality of student outcomes, meaning the characteristics of Thai graduates. Some scholars have pointed out that Thai higher education is in crisis because colleges and universities have produced graduates who are knowledgeable but "unschooled" in ethics (Ministry of University Affairs, 1993). Among the issues raised since 1995 in seminars and newspapers have been graduates' lack of work-related skills, lack of commitment to their organizations, and demands for high salaries ("New Graduates," 1995). It has been suggested that some graduates lack the ability to apply their skills to real life situations.

At another seminar held in 1998 ("Strategies for Producing Graduates for the 21st Century," 1998), participants concluded that graduates were the output of colleges and that colleges were therefore responsible for equipping students with suitable characteristics. Thus, Thais need to produce graduates who are acceptable in the workforce, both in this country and in international educational and business organizations.

In Thailand, private higher education institutions are affiliated with the Ministry of University Affairs, which supervises and requires Thai colleges (both public and private) to follow four purposes: providing education, conducting research, providing education to the public, and preserving Thai art and culture. Furthermore, higher education is considered a main factor in assisting the country's growth (Tantasiri, 1996). The first role, providing education to students, is the most significant role, because the

quality of graduates (i.e., the educational outcomes of colleges or universities) is also an indication of the state of civilization in Thailand. A graduate's performance is seen as a criterion of college success.

To meet educational standards, quality should be focused on fulfilling both academic and ethical characteristics. The educational outcomes of college students should be guided by the National Education Act of B.E. 2542 (1999). Chapter 1 (General Provisions: Objectives and Principles), Section 6, clearly states that

> Education shall aim at the full development of Thai people in all aspects: physical and mental health; intellect; knowledge; morality; integrity; and a desirable way of life so as to be able to live in harmony with other people. (ONEC, 1999, p. 4)

Section 24 of the national education guidelines contains the same theme: "In organizing the learning process, educational institutions and agencies concerned shall achieve, in all subjects, a balanced integration of subject matter, integrity, values, and desirable attributes" (ONEC, 1999, p. 24). These highlights of the National Education Act emphasize the need and intention to create Thai students endowed with a full complement of human qualities.

Thais have been concerned about their graduates throughout the history of the nation, not just beginning in this decade. During the era from Kings Rama V to King Rama VI (1868-1925), Prince Ratchaneechamcharat designated with a special Thai word—"suk-sit" (educated individual)—a person possessing six characteristics: language, good manners, good taste, reflection, growth, and power to translate thought

into concise action (Ministry of Education, 1999). Today Thai scholars still refer to those possessing a certain character as "suk-sit."

The present King Rama XI, King Bhumipol Adulyadej, has paid a great deal of attention to college graduates because he perceives them to be an indication of the state of civilization in Thailand. Throughout his reign, he has proposed useful guidelines for Thai graduates. His Majesty has emphasized four general characteristics graduates should possess: intelligence, a lofty mind, independent thinking, and harmony (Walailuk University, 1997). These four characteristics reflect the ideal of an educated person that His Majesty wants every Thai person to develop. The King's thinking is important because the Ministry of University Affairs integrates His Majesty's guidelines into policy on graduates and arranges seminars that focus on speeches from the throne about the qualities of ideal Thai graduates (Ministry of Universities Affairs, 1997).

Historically, Thais have viewed ethics equally as significant as knowledge and competencies. His Majesty's speech from the throne and his guidelines for developing Thai graduates, as well as the highlights in the National Educational Act 1999, MUA policies, Thai scholars' works and seminars on desirable or ideal characteristics of Thai graduates were expressing the strong attention on ethics in Thai society. Producing well-equipped graduates with "knowledge along side morality" therefore is the most important goal of Thai education.

Conceptual Framework

Research in the United States of America indicates that 4 years at college (environment [E]) leads to a variety of changes in students' growth in knowledge, skills, values, attitudes, and experiences, as documented in the works of both Astin (1977, 1985,

1993) and Pascarella and Terenzini (1991). However, what we do not know is whether these changes produce or develop graduates who meet the needs, expectations, and desires of those who will hire these college students in the real world of work. A central purpose of this study was to determine whether Thai employers agree with the two key groups inside colleges: faculty and college students on the characteristics of their private college graduates.

The present research looks outside universities because it focused on outcomes (O, the end state) and raised the question: "Is the perceived end state of O, as determined by faculty and students, commensurate with the perceived O for employers?" (see Figure 1).

Faculty
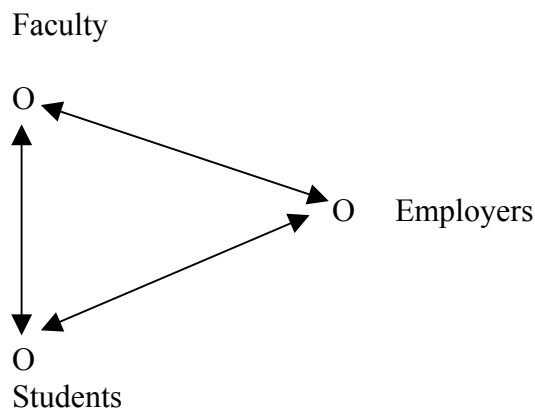
Figure 1. Perception of Outcomes of Business Administration Education Among Three Stakeholder Groups

This study focused on different perceptions of the outcome (O) state. Two questions concerning outcomes were addressed. First, when given a list of different kinds of outcomes (academic knowledge, school and work ethics, student intention, extracurricular activities, and work-related competencies), how did faculty, students, and

employers rank the relative importance of these outcomes? Second, to what extent did students possess these outcomes?

This study also assessed nonacademics: ethical, extracurricular activities as well as work competencies, because academic outcomes are not sufficient in the real world of business, nor are they sufficient in Thai culture where a strong emphasis is placed on Buddhist ethics and cultural values. These components interface one another and cause Thai students to be good human beings. Our graduates must have more than academic knowledge. This was confirmed in pilot interviews with faculty, students, and employers. These three groups all agreed that behavior and noncognitive characteristics, such as attitude, intention, and responsibility, are also important qualifications that lead students to be desirable or ideal students.

The present study has drawn on the work of Kongpetch (1998) into the perceptions of Thai college graduates and their employers concerning business administration students. Kongpetch's study is a recent work that is very important for understanding the key characteristics of Thai business graduates. He examined academic knowledge, work performance, ethics, personality and human relations. The present researcher chose three of Kongpetch's characteristics—academic knowledge, work performance, and ethics—and added two more—student intention and extracurricular activities in order to meet the specific needs of this study regarding employers' perceptions.

"Student intention" has a specific meaning in Thai culture. The Thai word for intention is "kwam-tang-jai," which does not have an exact English equivalent. It is roughly translated to mean "initiative," "persistence," or "dedication." However, the

connotation of the Thai word is not fully captured in the English translation as "intention." Also, there is no previous researches or studies on intention in Thailand. Student intention involves the effort to push students themselves the way colleges, faculty members, and employers would want, to do necessary things before being asked to do them, and to do the best they can. It should be noted that intention is different from ethics. For example, students who learn in classes with high intention may not behave ethically with their peers. For example, they may not meet their responsibilities to others by failing to do their share of work on group assignments. Or good students who have ethical qualifications, such as kindness with their peers, may not have intention because they do not prepare for classes and therefore make it more difficult for faculty to teach.

Participation on extracurricular activities offer functions as a "tie breaker." The employers use graduate participations to decide whom they will hire. Thus, it is their own advantage and also the advantage of a specific college to increase participation of its students. Thai employers generally perceive extracurricular activities as a crucial component of schooling leading to self-development. Because they often ask job applicants whether they have participated in out-of-classes activities, it was important to include this characteristic in the study.

Therefore, the substantive constructs of outcomes in this study are as follows:

1. academic knowledge

2. school and work ethics

3. student intention

4. extracurricular activities

5. work-related competencies

Method

A quantitative approach was used to explore respondents' opinions regarding the perceived characteristics of Thai private college students. Qualitative data were used to explore desirable characteristics.

The target population included three stakeholder groups (faculty, students, and employers) associated with private colleges and universities that offered 4-year management programs in the 2001 academic year. All 402 respondents (35faculty members, 351 senior students, and 16 employers) associated with the six private college and universities chosen from college sizes (small, medium, and large) were sample. They were asked to rate items concerned with student characteristics on a 5-point Likert scale of modified questionnaires and then to write comments in sections devoted to open-ended questions. In addition, employers rated students on a fifth characteristic category regarding work-related competencies.

Findings

The factor analysis reduces 32 college student characteristics to 7 components that became composite variables in the study, namely, Work ethics, Participate and voluntarism, Academic knowledge, General social ethics, Oppositions to obstacles, Basic courses, and Thai character. Almost all variables showed high total mean scores that mean all three stakeholder groups gave positive responses toward graduates with a management major.

The three groups did not differ in their ranking of four key characteristics (academic knowledge, school and work ethics, student intention, and extracurricular activities), except on academic knowledge. However, these differences among the three

respondent groups were small. Regarding ranking what is most and least important to them among these four characteristics can be concluded that all three groups agree on ranked extracurricular activities as the least important. They have slightly different ranked on the most important characteristic. Faculty ranked school and work ethics as the most important, while senior students and employers ranked student intention as the most important characteristic. Notice that 60% of employers give a strong rank to student intention as most important, whereas 50% of faculty members considered school and work ethics as most important.

Using one way-ANOVA, size of the college (small, medium, or large) showed more significance than those found for respondent types (faculty, students, or employers). Again, the differences among three respondent types and the three sizes of colleges were small. For work-related competencies that rated by employers only, found that large majorities of employer perceived overall work- related competencies of graduates in average to excellent level. Moreover, they rated graduates as good or excellent more than 50% of the time. Thus, it can be concluded that employers viewed private college graduates in management program are well prepared to work in high percentages compared to those rating students not well prepared to work.

Overall, faculty members were the most critical group among the three respondent groups because they had the lowest mean scores compared to senior students and employers on most questions. In other words, senior students and employers had closer perceptions about graduates' characteristics.

The open-ended question asked respondents to note which characteristics (in the three major characteristics: academic knowledge, school and work ethics, and extra-curricular activities) were the most important characteristics a graduate should have.

The findings for academic knowledge revealed that all three groups suggested various subjects (e.g., seminar classes, strategic planning) for the first important course to college students with a business administration major. They agreed on knowledge of management and administration as the second important course. In the school and work ethics category, all three groups considered honesty and responsibility as the most important ethic for graduating students to have. And they all agreed on the same characteristics of extracurricular activities that graduates should have. These characteristics were work experience, internship, leadership, and universities activities.

Conclusions

The summary of major findings can be drawn conclusions of this study as follows.

1. It appeared that faculty members had different perceptions from senior students and employer groups in several issues. One exception is academic knowledge that faculty had closer mean scores to their students. In other words, the students group had perceptions more closely aligned to employers than to their faculty. Their similar perceptions were shown in both numerical responses (i.e. means scores, ranking) and findings from open-ended questions.

2. There were only a few different ranks among three respondent groups on what is most important characteristic of academic knowledge, school and work ethics, and

extracurricular activities in the open-ended section. They also mentioned same characteristics in these three characteristics.

3. The results computed by size of the college (small, medium, or large) showed greater differences than those found for respondent type (faculty, students, or employers). However, their difference perceptions are few as the mean differences shown.

4. Among the three respondent groups, employers were shown to be more positive overall in their evaluations of private college graduates than either the college students themselves or their faculty members.

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THEME 4: QUALITY ASSURANCE AND STANDARDS

THE RELATIONSHIP BETWEEN STAGE FRIGHT APPREHENSION, SHYNESS AND PERSONALITY AMONG UUM ACADEMICIANS

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Abstract

Personality and stage fright apprehension are important factors that contribute towards teaching effectiveness. Individuals who are highly confident of themselves can control their level of stage fright apprehension when delivering speech in public. An exploratory study has been carried out to examine the level of stage fright and shyness according to gender, age, schools, workload and personality factors. It utilized the Personal Report of Communication Apprehension (PRCA-24), Shyness Test (Cheek, 1989) and the NEO-FFI (Neo Five Factor Inventory) as instruments to measure stage fright, shyness and personality elements. Data collected was analyzed using SPSS Win 10 and presented using inferential statistics. Results indicated that there are different effects of gender, age, schools, workload and personality factors on stage fright and shyness among UUM academicians. Overall, gender is a good predictor in determining stage fright apprehension among the respondents. Therefore, it makes a difference from gender perspective when individuals respond towards public speaking in educational context.

Introduction

Self-esteem and communication ability are affected negatively when an individual feels inadequate and incompetent when interacting with other individuals. McCroskey, Daly, Ayres, Hopf and Ayres (1997) refer this phenomenon as communication apprehension which is an expectation of failure in communication process at a given specific time and situation. It ranges from normal symptoms of nervousness to extreme social phobia. Vangelisti and Daly (1989) reported that in their study, twenty seven percent of young adults were unable to communicate effectively even after completing their college degree.

In educational field, there are professors with 30 years of teaching experience who still experience stage fright before starting new classes (Erickson, 2002). Performing in front of millions of fan could also trigger the notion of stage fright. Popular figures such as Barbra Streisand and Madonna admitted that they had to battle stage fright before their performance. (Marston, 2002). High expectation to present themselves in the best manner creates fear of failure in their presentation.

It is normal for debaters, diplomats, politicians and academicians to experience stage fright when delivering speeches in public. According to Herrick (2001), in the history of rhetoric, which started from Greek, Roman and Medieval Europe till present days, the ability of controlling stage fright is considered an asset for debaters. It is vital especially when propagating intended messages to the targeted audience. Rhetoric is the ability to change the receivers' opinions, attitudes and behavior according to the senders' intention

(Herrick, 2001). Therefore, the art of persuasion is important in educational field where leaders are nurtured to lead the nation. Thus, this paper discusses on the finding of the relationship between stage fright apprehension, shyness and personality among academicians, which is based on an explanatory study carried out in Universiti Utara Malaysia (UUM).

Stage Fright

According to Lucas (1998), stage fright can be defined as anxiety over the prospect of giving a speech in front of audience. Desberg (1997) interprets it as a fear of having our performance being analyzed negatively and Makay (1995) interprets it as speech tension. Gronbeck et al. (1995) refer stage fright as state apprehension where feeling of anxiety occurs in individual in particular settings. Devito (1994) defines it as a speaker apprehension while Arnett (1990) describes it as an anxiety associated with the act and anticipation of action when delivering public speeches.

McCroskey (2001) noted that speaker apprehension can be divided into four types, namely; (1) trait like speaker apprehension, (2) context-based speaker apprehension, (3) audience-based speaker apprehension and (4) situational speaker apprehension. Trait apprehension is a fear of communication in general regardless of the specific situations. These individuals are afraid to communicate in conversations, small group settings, meetings and public speaking conditions.

Fear of communicating in a specific given communication situations can be divided into three situations as mentioned above, which are context-based, audience-based and situational speaker apprehension. Context-based speaker apprehension is a fear to involve in interpersonal communication, small group communication, meetings and public speaking. Audience-based speaker apprehension is an orientation of an individual towards communication with a specific person or group regardless of the situational context. Examples include speaking with neighbours, friends and parents. Situational speaker apprehension is an approach of an individual to interact with a given individual or group at a specific time in a given context. For instance, delivering speech in an international seminar with multicultural background of audience.

Causes of Stage Fright

Early findings had suggested seven main causes of stage fright which emphasized on internal factors such as (1) low intellectual skills, (2) speech skill deficiencies, (3) voluntary social introversion, (4) social alienation, (5) communication anxiety, (6) low self-esteem, and (7) ethnic and cultural divergence in communication norms (McCroskey, 1980 and Bond, 1984).

According to McCroskey (2001), there are two major causes of stage fright mainly, internal and external causes. Internal cause is more concerned with psychological aspect. Thus, stage fright is mainly a mental phenomenon. Individuals make decisions about communication apprehension based on their self-perception of their own skills. Likewise,

they ignore their actual communication skills because they are trapped in their own mind-set. On the other hand, there are five distinct elements of external causes of stage fright mainly, (1) degree of evaluation (2) degree of conspicuousness (3) degree of ambiguity (4) degree of novelty and (5) degree of prior failure.

Degree of evaluation is basically a feeling that the higher the speaker feels that he is being evaluated, the higher the stage fright apprehension. Degree of conspicuousness is basically the feeling that the higher the speaker feels that he is the center of attention, the higher the stage fright apprehension. Whilst, degree of novelty is basically the feeling that the higher the speaker feels that he is in a novelty situation, the higher the stage fright apprehension. Lastly, degree of prior failure refers to the feelings that the higher the speaker experience failure in giving speeches, the higher the stage fright apprehension.

Overly protective parenting style also contributes toward stage fright apprehension (Schneier & Welkowitz, 1996). They exchange love with strict protection, which results less socialization with other children. In later stage, when these individuals turn to adulthood, they feels apprehensive to even start a conversation because of the unfamiliar situation surrounding them.

Ethnicity is also a contributing factor to stage fright apprehension (Chesebro, McCroskey, Atwater, Bahrenfuss, Cawelti, Gaudino and Hodges, 2002). It is a highly predictive factor especially when it involves communicating in a second language. The

result of their findings confirmed that ethnicity is a predictive factor of communication apprehension when English as a second language is measured on Hispanic and Black students who are the samples of the study.

Shyness

Shyness is a form of excessive self-focus where an individual is too anxious with his own thoughts, feelings and physical reactions (Henderson & Zimbardo, 1996). According to Neufeldt and Guralnik (1994), shyness is defined as diffident or uneasy in a company of others. According to Tulloch (1993), shyness refers to a feeling of uneasiness with other individuals, extremely self-conscious and always bashful. From a psychological point of view, shyness is a complex condition, which ranges from occasional awkwardness in social situations all the way to neurosis, which can completely destroy an individual's life (Moon, 1994).

Shaw (1986) further classifies individuals who are shy into three groups namely, (1) those who are unable to learn social skills (2) those who have learnt them but are unable to practice them due to high anxiety and (3) those who are capable to practice the social skills although they are still shy. In addition, Zimbardo (1977) explained that shyness led to communication apprehension and eventually to stage fright apprehension.

Shyness and low self-esteem are interrelated. According to a research by Pilkonis (Solomon, 1971), there is a significant negative correlation between shyness and self-

esteem. The study indicated that, when shyness is high, self-esteem is low and vice-versa (Solomon, 1971). Shaw (1986) describes that introvert is more self-sufficient, prefers a few good friends, enjoy more reading and quieter. Zimbardo (1977) associates shy people with introverts as they hold limited appeal compared to their needs for privacy and solitude. These individuals will experience difficulties in meeting people, initiating and maintaining conversations, deepening intimacy, interacting in small meeting groups and authority situations (Henderson and Zimbardo, 1996). The most critical areas are health and career advancement where shy individuals cannot express their feeling clearly and lost the opportunity to live longer and happier.

Factors Related to Stage Fright Apprehension

In 1936, Hans Selye conducted an experimental research on stress reduction during speeches and labeled the nervous phenomena as general adaptation syndrome (Selye, 1974). In 1970s, James McCroskey conducted research on stage fright and identified it as communication apprehension to describe stage fright (Metcalfe, 1998).

According to Schrof et al., (1999), one out of eight respondents feel nervous when communicating with others. This attitude has been described as social phobia where shy people experiences extreme social anxiety. Moreover, normal shyness and social phobia are apparently different but are related (Schrof et al., 1999). An analogy of shyness and social phobia is stated by Emanuel Maidenberg, associate director of UCLA's Social

Phobia and Performance Anxiety Clinic as fair complexion to skin cancer (Schrof et al., 1999).

A study by Tarlow and Haaga (1996) on self-concept revealed that positive affectivity was strongly associated with high self-esteem. This finding supports the fact that people with negative self-concept have low self-esteem and eventually lack of communication skills.

Seta and Seta (1996) conducted a study on communication apprehension and social anxiety. The research was based on the assumption that the larger the audience, the less anxiety will be felt by the speaker. The result supported the assumption, that individuals expected experiencing less anxiety in a group of one college professor and three high school students. In contrast when there was only one college professor in the group, the level of social anxiety is high. In this study, status and number of group's members are the independent variables, which determine the level of social anxiety of the respondents. Thus, as most studies are interested in studying college students (McCroskey, 1982), this study provides new insight by focusing on academicians as respondents.

Personality

MacKinnon (1994) defines personality as a person's distinctive interpersonal characteristics, described by other individuals who have seen the person in a variety of situations. It is functionally equivalent to a person's reputation. Personality theorists have

also regarded personality as a set of characteristics, which may be said to exist within the individual causing his or her to behave in a certain ways (Hampson, 1984). Cattell and Kline (1977) and Eysenck (1955) concluded these internal characteristics as personality traits, which are used for explaining individual differences, past and present behavior and predicting future behavior. However, in this study only neuroticism dimension is measured.

Objective of the Study

Recently, UUM has recruited many new lecturers who are fresh graduates with less exposure in teaching experience at university level. This phenomenon leads to an issue of stage fright apprehension among these individuals. Hence, the objectives of the study are to determine the differences and relationships of demographic factors which are gender, age, workload and school (different departments) and stage fright apprehension. In addition, the study also tends to seek association between neuroticism as a personality dimension and stage fright apprehension.

Methodology

Population and Sample

The population of the study is mainly lecturers who are working in UUM. The population is stratified into nine schools in UUM namely:

1. School of Management

2. School of Economy

3. School of Accounting

4. School of Social Development

5. School of Information Technology

6. School of Cognitive Sciences and Education

7. School of Finance and Banking

8. School of Tourism

9. School of Quantitative Science

Using stratified random sampling; the population, which is 500, is reduced to 217 as the appropriate sample of the study (Krejcie & Morgan, 1970). The sample is obtained from UUM latest reference (Registrar, 2000). However, only 143 had agreed to participate in this study due to unforeseen circumstances. From 143 respondents, 67 of them are females while another 76 are males.

Research Instrument

The questionnaire consists of four parts. Part A covers the demographic characteristics of the respondents. Part B focuses on issues related to stage fright apprehension while Part C deals with the shyness scale. Finally, Part D constitutes of statements, which measure personality dimensions of respondents. The twenty items for Part B are based on Personal Report of Communication Apprehension (PRCA-24) by McCroskey (1982) and for Part

C, the fifteen items of shyness are based on Cheek (1989). The NEO-FFI (Neo Five Factor Inventory) by Costa and McCrae (1989) is used to measure personality dimensions. The dimensions are Neuroticism, Extraversion, Conscientiousness, Openness to Experience and Agreeableness.

Results and Discussion

Gender

T-test analysis was conducted to determine if there is any difference between male and female lecturers on stage fright apprehension. Results indicate that t = 3.235, p < .05. Thus, male and female lecturers have been found to be difference in their level of stage fright apprehension. Looking at the mean for male (74) and female (67), male seems to experience more stage fright than female.

Gender factor is an important element in determining stage fright apprehension among UUM lecturers. Male experiences higher level of stage fright apprehension compared to female in their communication activities specifically while conducting lectures. This might be due to 'social pressure phenomenon', which expect male to perform better in communication skills than female. Even in Western society, this phenomenon is prevalent where male are reported to experience higher level of stage fright (Henderson & Zimbardo, 1996).

Age

When a One-Way ANOVA was performed to determine differences in age category of lecturers, no significant difference was found (F = 1.820, p > .05). It seems that the younger and older lecturers experience the same level of stage fright during their presentation in classes or lecture halls.

As mentioned by Erikson (2002), irrespective of age, everybody has the feeling of stage fright to a certain extent. Therefore, age is not a determinant factor in studying stage fright apprehension. Individuals from various stage of working experience in lecturing will be feeling nervous at some point during lectures. This finding confirms with the fact that even though experience is vital in controlling stage fright yet senior lecturers still have the feeling of uneasiness when conducting classes.

Workload

Looking at workload, which consists of the amount of contact hours in lectures among lecturers, a One-Way ANOVA was again computed. The result (F = 4.064, p > .05) yields no significant difference among different categories of workload among lecturers. Burden of workload does not justify the level of stage fright apprehension.

Workload is assumed as external factor, which can affect stage fright apprehension compared to gender, which is considered as internal factor. However, in this context, the amount of workload does not have any influence on the level of stage fright, thus, supporting Bond (1984) and McCroskey (1984, 2001) statements that external factor have less influence on stage fright.

Schools

Based on One-Way ANOVA result, no significant difference can be detected among different schools for stage fright apprehension (F = 1.921, p > .05). Different schools do not influence the level of stage fright among lecturers. Schools as well as workload are considered external factors. Therefore, it does not actually influence stage fright. Furthermore, there are a mixed number of junior and senior lecturers in each school, which may contribute towards this result.

Stage Fright Apprehension and Shyness

Pearson correlation was performed to seek for association between these two factors. Result indicates that stage fright apprehension is positively correlated with shyness (r = 0.734, p < .01). This association inevitably shows that the more stage fright the lecturers experience, the more shy they are. In other words, stage fright and shyness may have an effect on each other. The congruity between these two factors emerges possibly because these are two aspects of internal individual personality.

The relationship between stage fright and shyness is a common phenomenon when normal shyness and social phobia cases are taken into consideration. Normal individuals who can control their shyness level have different perspectives in handling stage fright apprehension in comparison to extreme cases of shy individuals (Schrof, Schultz, Koerner & Svetcov, 1999).

Personality and Stage Fright Apprehension

Of all personality dimensions, neuroticism was found to be positively correlated to stage fright ($r = 0.437$, $p < .01$). This indicates that the more neurotic the person is, the more stage fright he will be. Neuroticism is the extent to which a person is emotionally stable. Therefore, the less emotionally stable the person or the more neurotic he is, the higher the level of his stage fright in general.

Neurotic dimension of personality is a mixture of fear, anxiety, shy, timid and introvert. As such, it is well blend in individuals to produce, perhaps, a certain level of fright which is sometimes without reasons. To make things worst, when combine with a situation that may produce higher adrenalin level in individuals such as delivering lectures or speaking in public, the internal level of fear increases and this, therefore, result what we see as stage fright apprehension.

Regression Analysis

A simple regression analysis was conducted to determine which variable could predict stage fright apprehension. Based on the finding, gender was found to be good predictor among selected demographic factors on stage fright apprehension (p=0.018). In comparison to other factors, the beta weight is calculated as follows; age = .150, school = -.129 and workload = .032. The R value is .304 with R^2 is .065 while the F value is 3.338 with a p value of .012. So, linearity exists in this case, where gender is found to be a predictor to stage fright apprehension.

Conclusion

Communication abilities and pedagogy are interrelated elements. Lecturers without efficient communication skills face difficulty in interacting with students and also in controlling classes. The fear of communicating might be context-based, audience-based or situational speaker apprehension but the main issue is that it affects the positive flow of lectures. Hence, the interactional mechanism between students and lecturers that should be the highlight of each lecture is not present. Therefore, it may lower the teaching quality of lecturers.

Although level of stage fright has been found in this study, the differences could only be found in gender. Other demographic factors do not show significant differences.

However, stage fright and shyness are related to each other while neurotic person is associated with stage fright.

Managing stage fright apprehension is one of the skills needed by lecturers in ensuring teaching effectiveness in higher educational institutions. Lecturers are not without ability to learn specific social skills or unable to practice them because of high anxiety. Perhaps in due time and with proper training, stage fright apprehension may diminish. Related to that, university authority may conduct workshop, written guidelines and stage fright therapy training to individuals who suffer from extreme case of stage fright. The first few minutes of uneasiness feeling is acceptable but a prolong level of stage fright is unwarranted.

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SPEAKING TEST DEVELOPMENT

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1. Introduction

This paper aims to provide an overview outlining Cambridge ESOL's journey with respect to Speaking test development in its English language examinations. Cambridge ESOL is the new name for the former English as a Foreign Language Division of the University of Cambridge Local Examinations Syndicate (UCLES), established in 1858. Cambridge ESOL currently examines some one million candidates a year and the majority of these take face-to-face Speaking tests.

The paper will:

- Outline some of the past external research relevant to Cambridge Speaking tests

- Give a brief overview of some of the more recent internal projects

- Present possible areas of research for the future.

2. Pre-History

The oldest Cambridge ESOL test is the Certificate of Proficiency in English (CPE) which was first offered in 1913. A Speaking test was introduced at the outset and this set the pattern for the many different Cambridge English examinations which followed.

Cambridge has a long history of research into Speaking tests. A significant contribution was made by John Roach, who was appointed Assistant Secretary at the then UCLES between World Wars I and II: *Some Problems of Oral Examinations in Modern Languages: An Experimental Approach Based on the Cambridge Examinations in English for Foreign Students, Being a report Circulated to Oral Examiners and Local Examiners for Those Examinations.* Cambridge: UCLES. (Roach 1945).

During the Second World War, Cambridge ESOL was involved in the testing of foreign soldiers stationed in allied military forces in Britain. By 1944 nearly 4,000 candidates were taking either the CPE or the Lower exam (now First Certificate in English FCE).

These events led to a study of the process of oral testing by Roach. He reported that the primary function of the examination for allied service personnel was to encourage busy people in their study of English and that examinations gave: 'a stimulus and a focussing point for both teachers and taught' (Roach, 1945).

His paper dealt with the oral examination that had been included in the Cambridge Certificate examinations for quite some time and asked the following questions:

1. How closely could the standards of different oral examiners be co-ordinated by having them examine jointly?
2. Could standards be defined more precisely?

In the first experiment, at FCE level, 24 Polish Air Force officers in training in Britain had to read aloud a passage in English in front of a panel of three examiners and in the presence of the British Education Officers who were their teachers. The examiners and the observing officers awarded a numerical score to each candidate:

Maximum: 20

Pass: 8

Good: 12

Very good: 16

Roach was not convinced that the examiners had a clear idea of the absolute standard of the certificate but rather felt that they were applying a relative standard: 'It is probably, at least to some extent, the candidates who tend to set the standard in any test which has no absolute criterion'. (Roach, 1945).

While examiners in written examinations could keep an eye on their general statistical pattern (noting how many marks they gave at the various levels) the pressure of time and the smallness of the sample tested by each examiner made this impossible in the Speaking tests. Roach concluded that: 'standards of impression marking cannot be defined beforehand merely by written instructions' although some effort to set permanent standards could be made with gramophone recordings.

Roach noted that there were a number of causes of contamination that threatened valid results, including:

- the candidates were repeatedly anxious in the presence of an audience

- the inclusion of a 'dictation' component into the Speaking test skewed results

- the personality of the candidate 'charm (or the reverse) of manner or voice or appearance' or even 'good manners' may influence the judgement of the examiner

- males examining females and vice versa may perform differently than with members of their own sex.

It is interesting to note that Roach was very aware of the candidates as people and expressed concern over 'misfits and miscarriages of justice' especially at the borderline, particularly since careers depended on the application of a standard in a single examination and he points out that the standard was: 'hard to define and is almost certainly liable to error' (Roach, 1945).

Roach also stressed that it was important to: 'tell examiners what they should be looking for' and saw the value of recordings to make the standards clear, though in 1945 tape recorders were unknown even to the experts.

Roach's report is interesting because, as Spolsky points out in *Measured Words* (Spolsky 1995), it cast light on a stage in the development of modern language tests and posed basic questions about validity, offering sensible approaches to their solutions.

Spolsky acknowledges this study as being: 'probably still one of the best treatments in print of the way that non-psychometric examiners attempted to ensure fairness in subjective traditional examinations, whether oral or written' (Spolsky, 1995).

3. Within Living Memory

In her recently published book *A Qualitative Approach to the Validation of Oral Language Tests* in the Studies in Language Testing series (Lazaraton 2002), Lazaraton gives a comprehensive overview of more recent research which is of relevance to Cambridge Speaking tests.

There has been a vast amount of research into Speaking tests in recent times and a selection of studies has been made which are deemed relevant to the Cambridge Speaking tests and which should be borne in mind, not only when undertaking major revisions of examinations, but also when carrying out routine analysis.

One of the interesting comments from these studies comes from McNamara and Lumley who remind us that: 'The greater richness of face-to-face interaction in the assessment of speaking brings with it its own difficulties: the candidate's score is clearly the outcome of an interaction of variables, only one of which is the candidate's ability. It is important that the extent of these variables be understood, both for the theoretical reasons as part of our ongoing attempt to conceptualise the nature of performance assessment adequately, and for the practical reasons in ensuring fairness to candidates.' (McNamara and Lumley1997).

Lazaraton does, however, point out that for quite some time, most of the research into Speaking failed to go beyond the <u>outcomes</u> of the interviews, to the interview process itself, until in 1989 Van Lier urged researchers to: '….. understand the OPI (Oral Proficiency Interview), find out how to allow a truly conversational expression of oral proficiency to take place, and reassess our entire ideology and practice regarding the design of rating scales and procedures'.

In the last decade, there has been a proliferation of applied linguistics studies that analyse aspects of the discourse and interaction in oral interview situations and the following studies, which Lazaraton has identified and which are likely to be of interest to us, are grouped thematically.

3.1 Investigations into how participants behave in the interview context (as candidates, as interviewers, and as compared to and influenced by each other).

a) How candidates behave in the interview context

In his study, Young concluded that 'If the discourse dimensions of conversation between NNSs (non-native speakers) and NSs (native speakers) are to be part of oral proficiency then scripted interview formats such as FCE (First Certificate in English) are an inappropriate means of assessment since rigid interview behaviour may disadvantage higher-level speakers.' Young (1995)

Wigglesworth (1997) investigated the effects of planning time (one minute or no time) and concluded that while planning time was beneficial for high proficiency candidates in terms of accuracy, low proficiency candidates did not benefit.

Yoshida-Morise (1998) points to the importance of considering strategic behaviours in oral interviews.

Katona (1998) looked at the type of interaction patterns that occurred when candidates knew or did not know each other.

Moder and Halleck (1998) looked at the quality and frequency of turns taken by NNS and NS candidates and concluded that oral proficiency interviews are authentic speech events which sample numerous forms of communication.

Young and Halleck (1998) looked at 'conversational style', comparing the talkativeness of Mexican and Japanese speakers and argue that ... 'the transfer of conversation style can negatively impact on a candidate's ratings if that style requires or prefers under-elaboration of answers in a setting where elaboration is valued.'

Ross and Berwick (1992) were among the first researchers to examine whether or not and the degree to which ten speech modification features occurred in the oral proficiency interview and what the impact of such accommodation on ratings might be.

Ross (1992) questioned the reliability of judgements and suggested that a focus on process might be more enlightening. He claimed that in examiner training it would be useful to look at how responses are influenced by simplification and what 'necessary' versus 'superfluous' accommodations are.

Ross also looked at the behaviour of two experienced oral examiners and analysed the 'procedural script' and formulaic speech that interviewers use. This study seems particularly relevant to anyone involved in the production of balanced sets of questions in Speaking tests. He postulated that one interviewer's approach of asking short questions and accepting short answers may have led to lower ratings for candidates since they were not encouraged to provide more language. The approach of the second examiner who asked long and involved questions required a great deal of listening ability.

Morton, Wigglesworth and Williams (1997) looked at interviewer performance by having raters grade the interviewers on their behaviour using a questionnaire. This study is particularly interesting because it gives us a little insight into the thinking of examiners. The results from the questionnaires indicated that the raters considered interviewers 'good' if they established rapport with the candidates (especially those at the lower levels), modified interview prompts, and asked additional non-scripted questions. By analysing transcripts of the 10 'best' and the 10 'worst' interviews, they considered that the former used significantly more markers of politeness and more backchannels and were more actively involved in the interview.

b) How examiners behave in the interview context

Young and Milanovic (1992) compared the behaviour of candidates with the behaviour of interviewers in the FCE Interview. They explored:

- the quantity of talk

- topic initiations

- reactiveness

- topic persistence

as well as contextual factors such as:

- interview theme and task

- examiner gender

in both interviewer and interviewee speech.

They found that the resulting discourse was highly asymmetrical with both examiners and candidates constrained by what they could do.

Brown and Hill (1998) investigated how interlocutors' behaviour affects candidate performance. Their findings suggest that 'easy' interlocutors use more frequent topic shifts, ask simpler questions, and engage in more question-answer exchanges. 'Difficult' interlocutors challenged candidates more and acted more like a conversational participant. They suggest that 'test developers should take steps to ensure that candidates receive equal treatment from the interlocutors.'

3.2 Studies looking at the relationship between interview ratings and produced discourse

Douglas (1994) undertook a quantitative and qualitative analysis of oral test scores and oral discourse to see how they were related. The candidates were rated for Pronunciation, Grammar, Fluency and Comprehensibility. The ratings were used to identify 'similar' candidates whose discourse was then transcribed and compared on a number of variables such as:

- Grammar

- Vocabulary

- Content

- Rhetorical organisation.

The results indicated very little relationship between score given and discourse produced.

He attributed this somewhat perplexing conclusion to inconsistent rating, or rating of factors which were not part of the rating scale and strongly urged more studies on the rating process to follow up on these results.

3.3 Studies that show how discourse analysis can be used to construct or validate oral proficiency test rating scales

Fulcher (1996a) used discourse analytic techniques to construct an oral examination rating scale for Fluency, and then evaluated the scale for reliability and validity using more traditional test evaluation techniques. He recommended that test developers take validity seriously in the development process and not wait until after the event (i.e. a priori and a posteriori validation).

Young (1995b) critically analysed the rating scales in two oral assessment procedures. His analysis indicates that both fall short in portraying and measuring language ability.

To quote Lazaraton: 'What we see, then, is a discipline in the midst of exciting changes in perspective. It has become increasingly clear that the established psychometric methods for validating oral language tests are effective, but limited, and other validation methods are required, not just for empirical validation, but, based on the many misperceptions about conversations and interviews … for us to understand the basic nature of oral assessment process.' (Lazaraton 2002).

4. The American Connection

Although several of these studies considered the role of the examiner in oral testing, none of them did so with the explicit purpose of providing information that could be used in the test validation process.

However, a further series of studies carried out by Lazaraton all had as their goal to provide information for test developers about the 'examiner factor' in Cambridge EFL Speaking tests .

4.1 Cambridge Assessment of Spoken English (CASE)

The first study (on CASE) looked at how well interlocutors followed the Interlocutor Frame and found that adherence ranged from 40% to 100%.

A second set of findings dealt with specific interlocutor speech behaviours that were not prescribed by the interlocutor frame, and which, it was felt, seemed likely to introduce some sort of uncontrolled variability into the assessments. There were eight behaviours in which the interlocutors engaged:

- supplying vocabulary; completing responses

- rephrasing questions

- evaluating responses

- repeating or correcting responses

- stating questions

- drawing conclusions

- slowing rate

- topic priming.

This work culminated in the development of a proposed Examiner Evaluation template. Further developments since 1993 have seen checklists for Oral Examiner monitoring being used systematically as part of the monitoring process of RITCME.

4.2 Lazaraton and Saville

As an extension of this discourse, Lazaraton and Saville re-analysed the dataset to investigate the features of interlocutor behaviour which emerged in conjunction with outcomes in terms of candidate behaviour and ratings assigned.

Major interactions between eight test method characteristics (e.g. candidates / raters / gender / ages etc.) were investigated statistically using FACETS.   Then, qualitative discourse analysis was used to document actual interlocutor behaviour in the transcripts of the assessments.

In other words, they were interested in whether outcomes, as measured by ratings, would be influenced by variations in the assessment process, as operationalised by the speech behaviours of the previous study.

Lazaraton and Saville concluded that interlocutor language and behaviour must be standardised to some point though they were unclear to what extent it <u>should</u> be controlled, or, in fact, to what extent it <u>could</u> be controlled. The results also pointed to numerous possibilities for further research.

4.3 Certificate in Advanced English (CAE)

Once the CASE project was completed, Cambridge commissioned a second study proposing similar goals and using the same methodology as the first, to analyse the CAE Speaking test. The study set out to look at:

- Interlocutor adherence to the CAE Interlocutor Frame

- Interlocutor speech behaviours

- Elements to be included in a proposed CAE Oral Examiner evaluation template.

The study showed significant deviation from the interlocutor frame.

In Part 1, only three of nine possible prompts were used, the interlocutors using their own questions to round this section up. There are also examples of how examiners impact on candidate performances by introducing what they probably think is helpful comment.

For example, in the now defunct 'Describe and Draw' task, one interlocutor asked "How good are you at drawing?" and then went on to comment that it was a little bit complicated. On handing over some pictures of chairs, he sarcastically remarked "How interesting?" and this was picked up by the candidate. The report ends with a tally of speech behaviours in the CAE tests and proposes that a section on administration be added to the examiner evaluation template.

One hypothesis that came out of these initial studies was that the behaviours of interlocutors probably vary with the proficiency of the candidate - the lower the level of the candidate, the more prevalent the behaviours would become. As an initial step towards testing this idea, Lazaraton was commissioned to carry out a study of the Key English Test (KET) Speaking test. The most significant difference between KET and CAE was that at KET level, interlocutors tended to repeat candidate responses. These repetitions functioned to show agreement, to ask for clarification, or to delay a response.

The second most frequent behaviour, not noted in CASE or CAE, was the use of feedback markers , such as 'mmhmm' or 'right' or 'really' to show attentive listening.

4.4 Key English Test (KET)

The next stage in Lazaraton's investigations into Cambridge Speaking tests was to determine whether candidate proficiency level plays a role in the speech behaviour which interlocutors display, i.e. do the same interlocutors behave differently with higher level CAE candidates than with lower level KET candidates? As Table 1 shows, the most frequent interlocutor speech behaviour on both tests was rewording of questions and instructions. However, the data sample was not large enough to determine if the behaviours found occur in other tests with these same interlocutors or with the same frequency.

		KET	CAE
A)	Rewording questions / instructions	6/7	5/7
B)	Repeating responses	6/7	3/7
C)	Asking non-agenda questions	3/7	4/7
D)	Prompting candidate responses	2/7	4/7
E)	Drawing conclusions	3/7	1/7
F)	Varying the number of questions	4/7	0/7
G)	Commenting on responses	2/7	2/7
H)	Using feedback markers	0/7	3/7
I)	Joking with candidates	1/7	2/7
J)	Completing responses	0/7	2/7
K)	Evaluating with 'good'	2/7	0/7

L)	Correcting candidates	1/7	0/7

Table 1: Speech behaviours by examination all Interlocutors (N=7)

4.5 KET and CAE Comparison

In her summary of these three studies (CAE, KET and CAE/KET), Lazaraton draws attention to the need for further research into these areas. She acknowledges that the 'examiner factor' is the most important characteristic that distinguishes face-to-face Speaking tests from their tape-mediated counterparts but also alerts us to the danger of reliability being affected.

4.6 FCE

Focus moved from examiner speech behaviour to candidate output. Lazaraton carried out two studies as part of the FCE Revision project. The research question was: *What is the relationship between the task features in the four parts of the revised FCE Speaking test and the candidate output in terms of speech production?* The rationale was to establish that the features of speech which are purported to be evaluated by the rating criteria are in fact produced by the candidates.

In the first study, transcriptions were made of 6 speaking tests from the 1996 Standardisation Video.

In the second study, 14 audio-taped Speaking tests from the Nov/Dec 1996 administration were transcribed and analysed. Each part of the test was then studied for speech functions employed by candidates in each Part of the test.

The analysis of the Standardisation Video tests indicated that candidates, for the most part, did employ the speech functions that are hypothesised in the FCE Test Features document. However, it did highlight areas for consideration by the test developers, e.g. how important it is for candidates to be given the opportunity to talk about different time frames (which had a direct influence on materials writing for FCE Speaking).

The analysis of the 'live' transcripts showed that a total of 15 speech functions were employed, although some of these were ones which were not predicted in the FCE Test Features document. It is interesting to look back on this list of predicted functions in light of more recent developments with the revised CPE Speaking test. The FCE Test Features document gives the impression that certain functions will be found in or restricted to a particular Part of the test, whereas there is in fact a good deal of overlap between the four Parts of the test and some functions (cf Observation Checklist findings below).

Expected and Actual FCE Speech Functions

Expected		Actual
Part 1		
giving personal information	1	giving personal factual information
	2	giving general factual information
	3	expressing likes and dislikes
talking about present circumstances	4	talking about present circumstances
talking about past experiences	5	talking about past experiences
talking about future plans	6	talking about future plans
Part 2		
giving information	7	describing
expressing opinions thru comparing & contrasting	8	comparing and contrasting
	9	expressing an opinion
	10	expressing a preference
	11	justifying (an opinion, preference etc)
	12	speculating
Part 3		
speculating		
exchanging information and opinions		
expressing and justifying opinions		
agreeing and disagreeing	13	agreeing and disagreeing
suggesting	14	suggesting
Part 4		
exchanging information and opinions	15	requesting clarification
expressing and justifying opinions		
agreeing and disagreeing		

STL Conference 2001

1114

Table 2: Expected and Actual FCE Speech Functions

4.7 IELTS

Lazaraton carried out a study to identify features of language which distinguish different band scores as part of the IELTS Speaking Test Revision Project. It looked at 'live' examination performances at different levels in order to identify features of language which distinguish different band scores. 20 IELTS Speaking tests, recorded under 'live' conditions, were selected as being typical of candidate ability at different bands. The recordings were transcribed quite roughly and an analysis was carried out of the performances. A detailed summary showed how often particular features of language appear in the different band of assessment.

5. Recent Developments

The research carried out by Lazaraton is extremely detailed, requiring considerable expertise and many hours of work in the transcribing and analysis of tests and led to the setting up of an observation checklist project.

It became clear that a methodology was required that would allow test designers to evaluate the procedures, and especially the tasks, in terms of the language produced by the candidates. Ideally, this should be possible in 'real' time, so that:

a) the relationship of predicted outcome to actual outcome could be established using a dataset which reflected the test-taking population

b) larger numbers of candidate performances could be analysed in the time allowed.

Three types of observational checklists were used:

- Informational

- Interactional

- those concerned with managing the interaction.

The first study examined qualitative differences between CPE individual and paired Speaking tests in which the checklists were applied (ffrench 1999).

This study, which complemented a more quantitative study, compared differences between the 1984 Revision CPE individual format and the revised CPE paired format from:

        a. a theoretical standpoint

        b. transcriptions of test performances.

The initial draft version of a set of three Observation Checklists (OCs), developed by a group of researchers at the University of Reading together with members of the revision team, was used to identify language functions which (a) could be expected to be used and (b) were used by candidates in each part of the test. The OCs grouped language functions into three categories: informational functions, interactional functions, and functions which were involved in the management of the interactions. Initially, 30 functions of language had been identified as being relevant to the Main Suite Speaking tests and these appeared in different arrangements in the CPE Speaking tests according to the nature of the tasks.

The theoretical study suggested that the individual format of the 1984 Revision CPE Speaking test does not encourage informal interaction between the candidate and the examiner and, as a result, 10 of the interactional functions were unlikely to occur. However, the paired format of the revised CPE Speaking test provided candidates with the opportunity to use 28 of the language functions. This reinforced the view from the quantitative study that a more varied and balanced interaction was likely to take place.
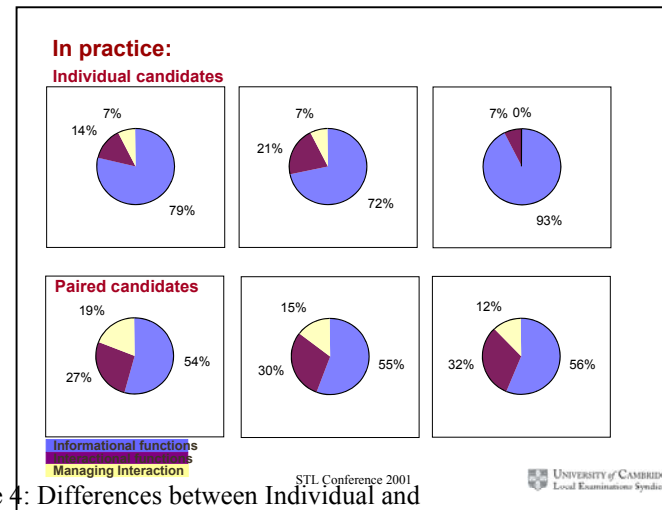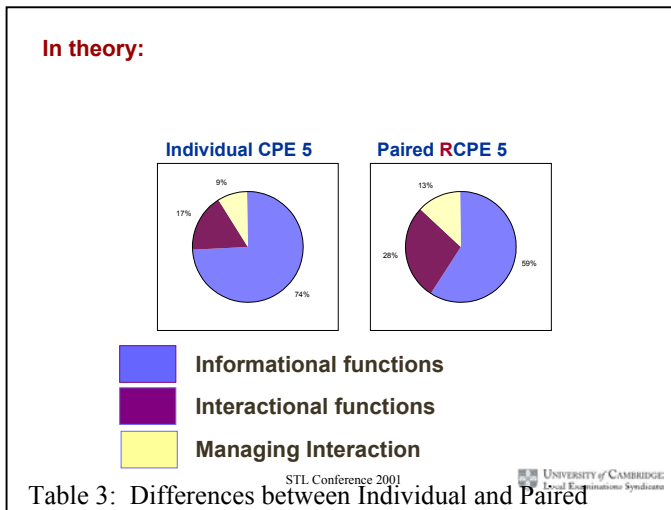
Table 3: Differences between Individual and Paired CPE Speaking Tests in Theory

Table 4: Differences between Individual and Paired CPE Speaking Tests in Practice

The OCs were then applied to performances on video and the picture which emerged was even more striking than the theoretical suggestion: in the individual format, informational functions accounted for between 72 - 93% of the test and in one case, using the 'set text' format, there was no evidence of any management of the interaction by the candidate. In the paired format of the revised CPE Speaking test, however, the split between language

functions was consistent between tests: approximately 55% informational functions; 30% interactional functions; 15% managing interaction.

Previous studies into speaker interaction in the one-to-one oral interview had drawn attention to the 'power relationship which exists between tester and candidate' (Taylor, 1999) and the internal UCLES EFL studies had shown that the paired format addressed this. Also, the positive aspects of the paired format for testing were in keeping with developments in language teaching since the 1980s: the focus on language for communicative purposes and a greater use of pair work and group discussion in the classroom. The result was a Management decision to offer only the 2:2 format. This decision was reinforced by results from a survey which showed that 28% of CPE candidates were already using the paired format, and from the views of nearly every candidate who was involved in the trialling stages who said how much they preferred the paired format. (ffrench 1999).

Having begun with Roach's concerns about assessment of candidate performance, we seem to have come full circle, because two major studies have recently been carried out in relation to the Assessment Criteria for Speaking. The first study outlined earlier is Lazaraton's work on the revision of IELTS Speaking. The second study has been in connection with the revision of CPE.

The Revised CPE Scales looked not only at the Common Scale for Speaking, which started their development prior to the introduction of the revised FCE in 1996, but also to

the Business English Certificate (BEC) and IELTS scales. There were six phases in their development, involving:

- internal personnel from the CPE Revision team and Validation

- an external expert in the fields of Pronunciation and Assessment Scale development

- the Chairs of FCE and CAE

- Senior Team Leaders

- UK Team Leaders

- Oral Examiners.

A further stage took place to see what impact the proposals for the revised CPE scales would have on the Assessment Criteria for PET, FCE and CAE. As a result, the assessment scales for these examinations were revised to be in line with the CPE scales. This was followed by an exercise which captured the marks and comments from 20 Senior Team Leaders around the world, who applied the revised assessment criteria to over 100 candidates on the Standardisation Videos for 2002, and confirmed the reliability of the revised scales. (ibid)

6. Future Directions

Almost 90 years after developing its first face-to-face speaking test for CPE, Cambridge ESOL remains committed to researching and developing valid and reliable tools for

assessing English speaking proficiency. Part of this process involves identifying the core research issues in testing spoken language and Cambridge

- test candidate

- examiner / interlocutor

- task

- assessment criteria

- accountability

This document is designed to provide an overview of the literature in these key areas, and to suggest avenues for future research. It is hoped to publish the document as part of a series of *Cambridge ESOL Research Papers* which will profile specific theoretical and practical issues relating to the Cambridge ESOL examinations.

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SEARCHING FOR QUALITY IN HIGHER EDUCATION AND ACCREDITATION STUDIES IN TURKEY

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In the societies which have a neat education system, it is noticed that the education systems tackle with the training at four stages as preschool training, primary, secondary and higher education. Though in the training of individuals and preparing them to the adult life, the importance and necessity of each education stage is not denied, it isn't discussed the importance of higher education for societies.

That situation has brought the quality of instruction members at the every education stages including the higher education and growing qualified members to the agenda. Because, the societies of todays and future –as Drucker (1993) calls them Information Society- need the individuals who knows the way to reach the information, changes the acquired information into the behaviour and to product new information by using them. For traning the individuals having these features, the teachers are expected to be guide and leader showing the way of reaching the information instead of being a teacher as a transferrer of traditional information as carrier of it. For realizing that, the programs traning teachers have great importance. In Turkey, has been tried to supply the education institutions, exterior the private higher education institutions and higher technology institutions till 1997-1998.

As a word "to authorize" or "approving the adequency" by putting into the Turkish, accreditation is defined as "fixing the adequency of a candidate institution to serve a duty or product certain goods within the determined standarts." In the accreditation process, beside explaining the determined and controlled by a certain authority about producing and serving a duty, the controlling defined isn't worked according to punishment, but to the aim of improvement and promoting the quality.

For this reason, the aims adapted for Education Faculties of the accreditation accepted as a system defining how it's obeyed to the determined standarts, supplying self-controlling in the organizations are below;

- To fix the appropriateness to the determined education standarts and criteria.

- To supply the guidess for improving the education programs to these institutions.

- To gain the approach of improving the branches related to the education in the country.

In that study, the accreditation process realizing in the Education Faculties of Turkey dependent upon these matters has been begun in the instruction years of 1997-1998 will be examined.

Introduction

Sharing and transferring knowledge, which were known long ago by primitive man, have changed and developed a lot up to now. As a result of becoming a systematic effort end being accepted as emerging from the family and as a work, sharing and transferring knowledge are vital parts of other work fields. (Tascı 1995).

The education is defined as "process of changing individuals in desired way via their own lives". This process is wanted to be completed via the education systems currently (Erturk 1977). It is thought that education systems, which aim bringing up the manpower that society needs, affect the societal prosperity. (Celik 1995). Societies try to transfer their cultural accumulation via educational institutes that they created to the new generations and increase their welfare having their manpower run production fields.

It is seen that formal education dimensions for the societies that have systematic education systems, are in four phases as preschool education, primary education, secondary education and higher education. There is no concern that all phases are

important but the importance of higher eduction is indispensable for a society (Bakioglu 1996; Duruiz 1995).

Interests and demand for higher eduction are increasing gradually in underdeveloped and developing countries such as Turkey, because people cannot find job after graduation form secondary education phase, and universty graduation is seen as a symbol of status etc. (Kaya 1993). Every year increasing numbers of youngsters take university entrance examination to enrol a higher education institute in any case. In order to meet the these demands of more than 1 million youngsters, (almost 1400 000 youngsters in 1999), the number of the universities has been 71 with the approach of a university for every provincial city.

This fast quantitative increase of higher education institutes caused poor quality. Efforts for opening higher education institutes without having sufficient tools and equipment and university teachers, affected the esteem of these institutes known as propulsive powers of society negatively and have been insufficient on meeting the   increasing education needs of the society.

The university entrance competition, which starts at the early grades, prevents primary and secondary education from reaching their prior objectives and converts these education phases to the exam preparatory courses. This situation has made the teachers quality in all phases of education and training teachers qualitatively current issues. Current and future societies that Drucker (1993) describes as the information society, need individuals who know how to reach information, how to convert the gained information to the behaviours, how to produce new information using the information on hand (Basar 2001). For bringing up the individuals with these features, teachers should

be guides who show how to reach information instead of being traditional teachers who convey and transfer information. For reaching this objective teacher training programs are very important (Guruz 1995). The education faculties in higher education had tried to train the teachers (except private education institutes and high tech institutes) for all phases until the 1997-1998 educational year.

The lack of planning and the insufficient teacher training programs in both education faculties and science and literature faculties created numbers of incompetent teachers, as a result of this, there had been a lot of teachers in unnecessary branches and shortage of the teachers in required branches.

A lot of insufficiencies were observed in both teachers and tools and equipment when teacher-training programs were looked at in both science and literature and education faculties. Teaching in classes by irrelevant and ignorant teachers instead of the field experts, putting irrelevant lessons to the curriculum so that the existing teachers could teach etc. caused the arbitrary practices in teacher training programs.

Education faculties should have a lot of responsibilities in both pre-service and in-service training of the teachers. For carrying out these responsibilities, education faculties should have competent and adequate teachers besides physical equipment. Although government gave a lot of responsibilities for the future of the society to the education faculties by Education Law numbered as 2547, unfortunately it did not support these faculties properly. Teaching activities in improper atmosphere and sending teachers to the other faculties (especially to science and literature faculties) to attend the classes created a teacher shortage in education faculties. This shortage caused incompetent and inexperienced teachers' assignments to these important positions.

As a result of these observed negativeness, YOK (Higher Education Council) has started studies for restructuring and standardisation of the teacher training institutes (education faculties) with the cooperation of World Bank and National Education Ministry. Based on these studies, in chosen programs of the education faculties of six pilot universities (Anadolu, Cukurova, Dokuz Eylul, Gazi, Karadeniz Teknik and Ortadogu Teknik Universities), accreditation studies were done 1998.

The word "accreditation" which can be translated in Turkish as" to authorise", "to attest to and approve as meeting a prescribed standard" or "to supply with credentials or authority;" is defined as approving of an institute's meeting a prescribed standard in production of good and services (YOK/ Dunya Bankası 1998). In accreditation process, however a standard defined and inspected by an authority is the subject, subject inspection is not for the punishment but for continuos improvement. (Peker 1996). For that reason, as a system of self-inspection, accreditation process has following adopted objectives for education faculties:

- providing appropriateness to the determined education standards and criterions

- providing guidance to these institutions in improving their education program

- providing the continuos improvement culture in the branches that related with education fields in the country

Inspired by the accreditation studies in higher education in other countries, Fıglalı (YOK 1997) suggest that following criterions can be used in accrediting the universities which completed their infrastructure, in global dimension:

1. student / university teacher ratio

2. competencies of the university teachers

3. research / development activities

4. scientific publication

5. number of the post graduate students

6. number of the international students

7. abundance of library and annual budget of libraries

8. number of the administrative and technique personnel

9. industrial relationships and carried out projects

10. facilities for sheltering students

11. facilities for students and workers

Criterions for accreditation studies for education faculties are as follows:

- Increasing the quality of teacher training programs and developing them systematically with an inside and outside inspection

- guaranteeing teacher training

- giving the assurance to the customers (parents, students, schools etc.) whom the education faculties give services that teacher training is carried out in accordance with the standards

Accreditation process at Higher Education Institutions is composed of six basic components such as general standards (planning, implementation, assesment of instruction; instructors; learners; faculty-school collaboration; foundation, library and facilities; management and quality assurance), self-assessment, visits, reports, the answers to the report by dean, and the decision by the authorised accrediting institute.

Accreditations systems of teacher training in Turkey as follows:

- a standard group that was developed by university teachers in Turkey, pre-tested in six pilot faculties, reviewed in and international seminar, and published

- explanation of each standard via indicators, proofs and various degrees

- a group of inspectors selected form the candidates presented by faculties

- an education program for inspectors

- a policy for conflict of interest which would be used for the selecting the each inspector that going to be involved in visits

- an education program for the faculties be ready for accreditation process

- self assessment report and documents which forms the fundamentals of the accreditation visit

- accreditation visit that includes a team that gives decision on teacher training programs

- a whole assessment based on grading each standard and general grading of each standard field

- a chance for the dean to review and to correct the unreal part of the draft of the report

- a chance for the dean to answer the assessment and the conclusion made in report by the team

- a unit of Higher Education Council (YOK) that will evaluate the proofs (self assessment report, team report, and answers of the faculty) after each visit and make suggestions on accreditation decision

- decision made by YOK

Accreditation studies have been performed at 66 Education faculties in Turkey since the 1998-1999 academic year. YOK has formed a group of members, consist of 25 instructors, and these members have been trained to evaluate faculties. 12 faculties have been visited since 1998.

Before the visits, the accreditation group demands a report about the programs from the faculty, and this report is sent to the group. This self-assesment report is investigated by the group. The members visit the faculty for three days. During the visit they interview the managers, instructors, learners and they investigate the documents. After the visit, the members send an accreditation evaluation report to YOK. Then YOK decides whether the faculty is accreditated or not.

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UNIVERSITY INSTRUCTORS' TESTING PRACTICES AND MEASUREMENT COMPETENCY: A PRELIMINARY STUDY

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Abstract

Instructors' knowledge of testing and the quality (or the lack of it) of their assessment of the students' achievement are the concerns of this paper. The aim of the study was to get an overall picture of the testing practices of the instructors at an institution of higher learning. Specifically, the study intended to ascertain the instructors' general perception of summative evaluation, their practices in the construction of an achievement test and the application of the scoring procedures. The study also intended to find out the extent of their knowledge of assessment. The respondents consisted of 44 instructors at a local institution of higher learning. To obtain the responses from the instructors, a checklist/questionnaire containing items pertaining to procedures of test development and scoring procedures was used. The checklist was adapted from Osterhof (1990). The findings of the study indicated that the instructors had a reasonable understanding of summative evaluation and on the construction and scoring procedures of an achievement test. It was also found out that the instructors have also good knowledge of assessment. The findings also indicate that there is a pressing need to offer a course on language testing and measurement for ESL instructors.

Introduction

One of the important aspects of teachers work is assessing students' achievement (Daniel & King 1998). Assessing students' achievement has become an integral part of teaching and that teachers spend quite of their time on preparing and assessing students' learning (Stiggins 1991). Teachers need the information to make a number of decisions namely to help guide them to define and evaluate their teaching objectives. In addition, they need the information to find out if students are having difficulties with certain language features. The students, on the other hand, need the information to help them in their learning objectives. Hence, the achievement test prepared by the teachers need to be of certain standards and meet the characteristics of a good test.

Studies by Daniel & King 1998 and Schafer & Lissitz 1987 have indicated that teachers' lack of knowledge in testing and measurement could affect how they assessed their students. In the local setting, a study by Jabatan Pendidikan Kelantan (1996) involving 335 respondents pertaining to assessment activities in the science subjects, found that 58% of the respondents admitted that they have never attended any course on testing and measurement. It the study, it was also found that the teachers lacked the skills and knowledge in test construction.

Shapiro (1995) maintains that to meet the requirements of set by the National Board of for Professional Teaching Standards, instructors need to have an adequate knowledge of testing and measurement procedures. Mohamad Sahari (1999) similarly argues for the certification of testing competency among instructors of higher learning of institution.

In short, it is pertinent that teachers need to show that they have adequate knowledge of testing and that they apply correct measurement procedures. Teachers' measurement competency would help them to become effective teachers.

Purpose of the study

The main of the study was to investigate the testing practices of the ESL instructors at a higher institution of learning. Specifically, the aims of the study were to investigate the following; (1) Do they follow the right procedures in developing an achievement test? (2) Do they follow the right scoring procedures? (3) What are the instructors' understanding/perception of summative evaluation? and (4) To what extent is their knowledge of assessment?

Methodology

Participants

The participants involved in the study consisted of ESL instructors from a local institution of higher learning. All together 44 instructors participated in the study. The sample size represented about 60 % of the total number of population under study. With regard to demographic characteristics, 82% of the participants who responded to the questionnaire/checklists were females. This was not done on purpose but rather reflective

of the total population of the faculty that consisted more than more than 80% females. In terms of academic qualifications, 25% of them were bachelors degree holders, 61.4% masters and 13.6% PhDs.

Instrument

In order to find out the testing practices of the language instructors, a checklist/questionnaire was used. The checklist was adapted from Oosterhof's (1990) and Mohd Shaari's (1999). It contained 35 questions. There were twelve questions on the procedures in constructing an achievement test and eight questions on the scoring procedures. To find out the instructors' understanding of summative evaluation and their testing competency a set of 16 questions were also formulated. The questionnaire was piloted to a group of five teachers earlier on. The purpose of piloting of questionnaire was to ascertain the clarity of the instructions and the statements.

Results

One of the specific aims of the study was to find out the testing practices of the language instructors in constructing end of semester tests. Table 1 summarizes the testing practices of the language instructors. The study shows some remarkable findings. One important finding that can be derived from the table is that only 36.4 % of the instructors surveyed actually prepared a table of test specifications to plan for their tests. A total of 63.3% did not create a table of specifications for thetests. This is really surprising considering that

content validity is very important aspect especially in achievement test development. This lack of application of the activity on the part of the instructors raises the issue of content validity of the tests prepared by these teachers.

The second finding worth mentioning is that most of the ESL instructors did not get other instructors to evaluate their test specifications. A total of 59.1% of the respondents surveyed did not get other instructors to evaluate their test specifications. Only 40.9% of the instructors actually engaged other instructors to evaluate the test specifications. Getting the help of other instructors to evaluate the specifications is one important activity of developing an achievement test. One way in which a test can be ascertained of its construct validity is through getting others to evaluate the test specifications.

Overall, most of the language instructors surveyed actually followed the important procedures in constructing their end of semester tests. A total of 97.75 of the instructors made a point to actually inform the students with regard to the format of the question. A majority of them (75.9%) maintained that they defined the performance objectives to be tested. The results also indicated that 81% of the language instructors surveyed specified the intended contents of the end-of –the –semester tests.

Table 1

Testing practices of language instructors in test development

| I specify the intended contents of the end-of-semester test | 81% | 18.25 |

I consider the students' inputs in deciding the contents of the test	**61.45**	**38.6%**
I define the performance objectives to be tested	**79.5%**	**20.5%**
I rank the relative importance of the contents	**75%**	**25%**
I determine the number of questions according to the relative importance of the topics to be tested	**75.9%**	**20.5%**
I create a table of specifications to plan for the test	**36.4%**	**63.6%**
I have other instructors to evaluate the table of test specifications	**40.9%**	**59.1%**
I inform the students about the format of question	**97.7%**	**2.3%**
I ascertain that the reading skills required by each question below that of students' ability	**65.9%**	**34.1%**
I assess the level of difficulty for each item	**81.8%**	**18.2%**
I estimate the amount of time spent on each question	**63.6%**	**36.4%**
I compare the test questions to the specified performance objectives	**72.7%**	**27.3%**

Another aim of the study was to find out the application of the right scoring procedures among the ESL instructors. Judging from table 2, the language instructors in general followed the principles of the scoring procedures. A total of 70.5% of the instructors developed a scoring plan when they wrote their test questions. A great majority of them (79.5%) also indicated that they specified the total number of points each item was worth. One interesting finding that can be gathered from table 2 is that 75% of the respondents reported that they actually seek other instructors' judgment on the accuracy of the scoring plan. This is interesting because the majority of them did not consult other instructors to evaluate their test specifications. It can be deduced from the findings that the instructors tended to put more emphasis on the reliability aspect of the test as compared to validity.

Another important finding of the study is that 70.5% of the instructors indicated that they actually penalized students for spelling and grammatical errors in an achievement test.

An achievement test especially those meant for content courses should be based more on the students' achievement rather than their language skills. The practice of penalizing students for spelling and grammatical errors does not speak well of the principles of achievement testing.

Another discomforting finding is that the instructors have also reported that they awarded points for presentation style and use of language. This practice would not be much of a problem if the test were meant to assess language proficiency. It is apparent that this practice of awarding marks other than students' achievement goes contrary to the principles achievement test development.

Table 2:

Application of scoring procedures

	YES	NO
I develop a scoring plan when the test question is written	70.5%	29.5%
I list the attributes to be evaluated for each question	59.1%	40.9%
I specify the total number of points each item is worth	79.5%	20.5%
I determine that the points associated with each question are proportional to the relative importance of the content being tested	77.3%	22.7%
I specify guidelines for awarding points to students answers	77.3%	22.7%
I seek other instructors' judgment on the accuracy of the scoring plan	75%	25%
I award points for presentation style and use of language	95.5%	4.5%
I penalize students for spelling and grammatical errors.	70.5%	29.5%

The third aim of this study was to find out the instructors' perception of summative evaluation and their knowledge of assessment. Overall, the ESL instructors have shown

quite a good knowledge of assessment. A great majority of the instructors (95.5%) believed that assessment is an integral component of teaching and learning process. They also agreed that content validity should be built even before the test was constructed. Less than 10% disagreed with the statement. A total 90.1% of the instructors also 'agreed' and 'strongly agreed' that teachers must ensure the validity of the test items. With regard to test specifications, 56.8% of the instructors believed that a table of specifications must be created before constructing the test items. However, this was not done based on the earlier findings where 63.6% of the instructors have indicated that they did not create a table of specifications to plan for their tests.

In terms of knowledge of testing, 27.2% of the ESL instructors have reported that they have an inadequate knowledge of testing and measurement.A majority of the instructors (63%)indicated that they have adequate knowledge of testing. However, the majority of them also reported that they needed a course on testing and measurement. Less than 10% indicated that they did not need such a course. A total of 61.3% of the respondents reported that they were concerned about the test they constructed.

Table 3

Instructors understanding of summative evaluation and testing competency.

5 – Strongly agree

4 – Agree

3 – Unsure

2 – Disagree

1 – Strongly disagree

	SD	D	U	A	A
Assessment is an integral component of teaching and learning process	4.5%			36.4%	59.1%
Content validity should be built even before the test is constructed	4.5%	2.3%	4.5%	31.8%	56.8%
Teachers must ensure the validity of the test items	4.5%	4.5%		34.1%	56.8%
Teachers must plan teaching and learning strategies based on the analysis of the test scores	2.3%	6.8%	13.6%	45.5%	31.85
A table of specifications must be prepared to construct the test items		9.1%	11.4%	56.8%	22.7%
A table of specifications must be drawn before constructing the test items		9.1%	15.9%	50%	25%
All test questions are based on course objectives, textbooks and syllabus	4.5%	4.5%		47.7%	43.2%
Test scores should reflect students' ability in the skills they are tested on	4.5%	6.8%		38.6%	50%
Teachers must have adequate knowledge of testing and measurement	2.3%	6.8%	2.3%	50%	38.6%
Teachers' lack of knowledge of testing undermines the quality of their assessment of students' achievement	2.3%	4.5%	11.4%	47.9%	34.1%
I have an inadequate training in testing and measurement	4.5%	22.7%	9.1%	50%	13%
I am concerned about the test that I construct	9.1%	15.9%	13.6%	29.5%	31.8%
I rely on my own trial-and-error experiences on	11.4%	22.7%	13.6%	45.5%	6.8%

testing to make high stakes decision					
I am unable to communicate the test results effectively to my students	11.4%	50%	6.8%	27.3%	4.5%
Proper assessment allows teachers to diagnose students 'strengths and weaknesses	9.1%	2.3%		34.1%	54.5%
I need a course on testing and measurement	11.4%	6.8%	11.4%	45.5%	25%

Conclusion

With regard to the question whether the instructors followed the correct procedures in constructing an achievement test, it can be argued that in general they followed the valid procedures of test development. The instructors specified the intended outcomes of the test. They also defined the performance objectives to be tested. In addition, they informed the students of the format of question. However, the study also found that they did not seem to put much interest in creating a table of specifications for their tests although, this is an important aspect of test construction. Based on the their responses, it can be deduced that the instructors have not put in place the right mechanism to ascertain content validity of their tests.

Even though the majority of the instructors did not create test specifications, the study found that they tended to adhere strictly to the scoring procedures. Most of them indicated that they developed a scoring plan when the test question was written. This goes to show that they tended to give much importance to reliability of their test rather than validity.

With regard to their understanding of summative evaluation, most of them have shown that they had a reasonably good knowledge of summative evaluation. They even made known that a table of specifications must be created before constructing the test items. Nonetheless, this was not translated in their testing practices.

As for their testing competency or the extent of knowledge of assessment that they had, the majority of them reported that they needed a course on testing and evaluation. They still have doubts in their ability to construct a proper achievement test.

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Appendix 1

Dear Colleagues

The aim of this checklist is to collect relevant information pertaining to the testing practices of university instructors. All the information gathered from the checklist is for academic purposes only. Please give your full support by answering all the questions as honestly and as accurately as possible. Your cooperation in making this research a success is highly appreciated. Thank You.

Background of respondents

1. Sex

    i. Male: _____

    ii. Female: _____

2. Age

    i.   20-29 _____

    ii   30-39 _____

    iii   40-49_____

    iv   50 and above _____

3. Academic qualification

    i. BA: _____

    ii. MA: _____

    iii. PhD: _____

4. Teaching experience

    i   Less than 5 years:_____

ii. 5 to 10 years: _____

iii More than 10 years:_____

5. Area of specialization

    i. TESL: _____

    ii Linguistics:_____

    iii Literature;_____

    iv Proficiency;_____

6. Have you attended a course in Testing and Measurement

i. Yes:_____

ii. No:_____

7. Have you been a course coordinator?

1. Yes: _____

ii. No: _____

	Test construction and scoring procedures	YES	NO
1	I specify the intended contents of the end-of-semester test		
2	I consider the students' inputs in deciding the contents of the test		
3	I define the performance objectives to be tested		
4	I rank the relative importance of the contents		
5	I determine the number of questions according to the relative importance of the topics to be tested		
6	I create a table of specifications to plan for the test		
7	I have other instructors to evaluate the table of test specifications		
8	I inform the students about the format of question		
9	I ascertain that the reading skills required by each question below that of students' ability		
10	I assess the level of difficulty for each item		

11	I estimate the amount of time spent on each question		
12	I compare the test questions to the specified performance objectives		
13	I develop a scoring plan when the test question is written		
14	I list the attributes to be evaluated for each question		
15	I specify the total number of points each item is worth		
16	I determine that the points associated with each question are proportional to the relative importance of the content being tested		
17	I specify guidelines for awarding points to students answers		
18	I seek other instructors' judgement on the accuracy of the scoring plan		
19	I award points for presentation style and use of language		
20	I penalize students for spelling and grammatical errors.		

For the following statements please put a tick in the right box according to the scale given below:

5 – Strongly agree

4 – Agree

3 – Unsure

2 – Disagree

1 – Strongly disagree

	Statements on perception of summative evaluation & knowledge of assessment	**1**	**2**	**3**	**4**	**5**
21	Assessment is an integral component of teaching and learning process					
22	Content validity should be built even before the test is constructed					
23	Teachers must ensure the validity of the test items					
24	Teachers must plan teaching and learning strategies based on the analysis of the test scores					

25	A table of specifications must be prepared to construct the test items					
26	A table of specifications must be drawn before constructing the test items					
27	All test questions are based on course objectives, textbooks and syllabus					
28	Test scores should reflect students' ability in the skills they are tested on					
29	Teachers must have adequate knowledge of testing and measurement					
30	Teachers' lack of knowledge of testing undermines the quality of their assessment of students' achievement					
31	I have an inadequate training in testing and measurement					
32	I am concerned about the test that I construct					
33	I rely on my own trial-and-error experiences on testing to make high stakes decision					
34	I am unable to communicate the test results effectively to my students					
35	Proper assessment allows teachers to diagnose students 'strengths and weaknesses					
36	I need a course on testing and measurement					

A PROFESSIONAL AGENDA: AN INITIAL STEP TOWARD ENHANCING THE QUALITY OF TEACHING IN UNIVERSITI MALAYSIA SARAWAK (UNIMAS)

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Abstract:

This paper was originally written as a proposal to the management of the Faculty of Cognitive Sciences and Human Development, Universiti Malaysia Sarawak (UNIMAS) in the bid to enhance the quality of teaching on a university-wide basis. The recent quality assurance movement on teaching in UNIMAS is an important step to foster excellence in teaching and to eventually meet one of Malaysia's visions of being a center for quality education by year 2020. Although teaching is one of the core businesses in institutions of higher learning, it is ironic that academics in many universities are not required to possess preparatory training in teaching, unlike schoolteachers. As a forward-looking university, one of the initial mechanisms suggested in this paper is to conduct a workshop series to all UNIMAS academics. The workshop series comprise topics such as *Introduction to University Teaching*, *How Humans Learn? Assessment*, *Instructional Design*, *Instructional Technology*, and *Learning from the Teaching Practice*. The aims of the workshop series are to train the UNIMAS academics in teaching on a short-term basis, to initiate a long-term commitment toward excellence in teaching, and to develop a collaborative academic community that places special commitment to excellence in teaching. The required institutional commitment, the success factors, and the long-term plans for enhancing teaching at UNIMAS are also discussed in this paper.

1. Introduction

One of Malaysia's blueprints on education is to increase the student intake by 26 percent and to be world-class center of quality education by the year 2020 (Geoffrey, 1996). As a developing nation pressured to enhance our competitive edge in business and industry, quality assurance of teaching and learning (Ismail & Mohamed, 1996) in higher education is an important factor to ensure that the universities meet up to the standards of its customers namely the students, their families, organizations, industries, government, media, and the society at large. As an institution of higher learning that aims for excellence in teaching, research, and learning, Universiti Malaysia Sarawak (UNIMAS) is also subjected to be accountable to all its customers.

2. Quality assurance movement on teaching in UNIMAS

In this paper, I do not attempt to debate about the meaning of "quality" in higher education since no consensus exists among theorists and practitioners on how to define quality. Rather, I would like to discuss the details of how the initial endeavor to enhance the quality of teaching could be achieved.

Very broadly however, quality can be defined as a benchmark that allows no compromise (Ashcroft, 1995). Quality assurance on the other hand, can be defined as a technical term to depict the systematic and explicit approach in attaining high quality (Fry, Ketteridge, & Marshall, 1999).

In Malaysia, the quality assurance division in the Department of Higher Education of Malaysia began recently in December 2001. One of the goals of this division is to promote the public's confidence in the standards of institutions of higher learning (Bahagian Jaminan Kualiti, 2002).

As a young university that has been grappling with the logistics of recruiting suitable academics and supporting staff, increasing student population, purchasing equipments for teaching and learning, and building required facilities for the past ten years, the quality assurance movement on teaching in UNIMAS is still at its infancy. The Vice-Chancellor for Academic and Student Development recently commissioned the Faculty of Cognitive Sciences and Human Development to propose a training program for academics to improve their teaching quality. Ismail (1996), a former Vice-Chancellor of UNIMAS has also suggested that since teaching is one of the core businesses of a university, it must align its mission with the mission of developing quality human resource. One of these missions to be aligned and continually redefined is the enhancement of the teaching quality in UNIMAS.

3. A professional agenda: enhancing the quality of teaching in UNIMAS

There are currently eight faculties in UNIMAS that conduct taught courses. These faculties are the Faculty of Applied and Creative Arts, the Faculty of Cognitive Sciences and Human Development, the Faculty of Economics and Business, the Faculty of Engineering, the Faculty of Information Technology, the Faculty of Resource Science and Technology, the Faculty of Medicine and Health Sciences, and the Faculty of Social

Sciences. Currently, there are a total of 414 teaching staff in UNIMAS (Universiti Malaysia Sarawak, 2002), out of which five who hold master's degree in education while the others hold PhD degrees, master's degrees, and bachelor's degrees in their disciplinary areas. This data shows that UNIMAS academics similar to those from other universities lack the formal training in teaching (Kogan, Moses, El-Khawas, 1994, p. 76; Taylor, Gough, Bundrock, & Winter, 1998).

As stated in the UNIMAS corporate plan for 1997-2000 (http://www.unimas.my), "UNIMAS is in the pursuit of excellence in teaching, research, and scholarship." Almost a decade old, UNIMAS is in the crucial stage of asking itself whether it is seriously developing a culture for enhancing the scholarship of teaching on campus.

One of the initial ways to achieve this professional agenda is to conduct a workshop series on teaching for all academics. According to Weimer (1990) who specializes in instructional development, teaching effectiveness workshops are among the initial activities used in faculty development efforts and they rank among the most popular in developing faculties, departments, and institutions (Badley, 1999). The aims of the proposed workshop series are to train the UNIMAS academics in teaching on a short-term basis, to initiate a long-term commitment toward excellence in teaching and learning, and to develop a collaborative academic community that values excellence in teaching.

The short-term goal of conducting the workshop series is to prepare the academics to face an increasingly challenging environment due to the need to keep up with the changes in technology, knowledge, the nature of academic disciplines, and new developments in the learning sciences. The workshop is also a springboard for long-

term commitment among academics from various faculties to realize the complexity of effective teaching and the need for continuous professional development. Continuous professional development has been suggested by Boyer (cited in Nicholls, 2002) to be this: "All faculty members, throughout their careers, should themselves, remain students. As scholars they must continue to learn and be seriously and continuously engaged in the expanding intellectual world." Finally, a collaborative academic community will also be developed when academics in UNIMAS view themselves as a community that possess a culture that is reflective, values excellence in teaching, and is informed regarding the latest issues on university teaching. This community no longer views teaching as a "solo" profession but rather as profession that is open to evaluation by the public, fellow peers, and students.

4. The workshop series

Teaching is a complex task that requires academics to have deep understanding in various areas. The workshop series comprising seven major modules are to be conducted in the sequential order presented below:

4.1 Introduction to university teaching

Issues covered will include the professional characteristics of university teachers, assumptions held by the academics, and teaching as a "solo" profession (Weimer, 1990).

Professional characteristics. Discussions include three main issues. These are:

1) University teachers lack the teaching experience or formal instruction in teaching.

2) University teaching is psychologically and emotionally draining. Issues regarding burnout and the cause for creating optimism in teaching will be discussed.

3) Students today are more challenging to teach. The lack of alternative techniques and strategies that makes it hard to meet the learning objectives will also be discussed.

Commonly held assumptions. The participants will also be exposed to the common assumptions held by university teachers. These assumptions are:

1) *If you know it, you can teach it.* Discussions will include the ingredients that result in effective instruction and the fact that a majority of academics become frustrated because of their inability to communicate their knowledge with their students.

2) *Good teachers are born.* Discussions will include the identification of good teachers, the qualities they possess, and that effective teaching is learnable.

3) *Academics teach content.* Discussions will include the balancing act of teaching the content and teaching the students. The participants in this workshop will explore the aims of education and the need to teach not

only the content but also thinking skills such as critical thinking, analytical thinking, and synthesis skills.

Teaching as a solo profession. This component is meant to create awareness among academics that teaching is not a solo profession. It is necessary to make the scholarship of teaching public and susceptible to critique. Discussions will include teaching as a "solo" profession, factors that cause the vulnerability of being observed by others while teaching, and admitting fears of being observed. A brief comparison between teaching and the other rigorous professional fields such as law and medicine where public scrutiny is the norm will also be made.

4.2 Human Learning

Learning is an important task that humans perform for the rest of their lives. The goals of this module are to ensure that the academics realize that there exists a science of learning that guide successful and effective learning and to expose academics to the research developments on cognition and its application to learning. The participants in this workshop will investigate the mechanisms and principles in behavioral changes, knowledge acquisition, and learning processes. Essentially, this module will focus on questions such as: *What does teaching for understanding mean? How do people learn?* (National Research Council, 2000). Topics covered in this workshop include behaviorist theory, the cognitive revolution, the differences between the behaviorists' and cognitivists' perspective of learning, human memory, knowledge representation,

metacognition, and higher order thinking processes such as creativity, problem solving, reasoning, and decision-making. The participants will also be exposed to the various types of intelligences, the relationship between the mind, brain and learning, and the current developments in cognitive science applied to learning. The academic's assumptions about human behavior and human cognition, and its development will be stressed. The participants will appreciate the importance of understanding their own learning processes as well as the learning processes of their students.

4.3 Assessment

According to the National Research Council (2000), "assessment and feedback are crucial for helping people learn." The broad aim of this module is to facilitate the academics' understanding on the importance of assessment, feedback, as well as the types of assessments that they can deploy to "test" students' thinking. The academics will learn that the primary aim of assessment is to educate and improve students' performance and not merely to measure or to audit it. The academics will also discuss the principles of learning and understanding such as:

- Assessment should mirror good instruction

- Assessment should happen continuously

- Assessment should provide information (to the academics and students) about the levels of understanding of the students.

- Assessment should be aligned to the learning objectives of the course.

Bloom's taxonomy will be discussed in this workshop series to ensure that academics understand that assessments should reflect the quality of students' thinking. The characteristics of various assessments will be discussed in relation to the purpose of assessment. The academics will learn that good instruction means teaching for understanding rather than merely emphasizing the rote memorization of facts and procedures. The participants will also learn about the characteristics of good assessment instruments, which include validity, reliability, and practicality. Formats of assessment such as performance assessments comprising on-the-job observation, simulations, essays, and portfolios and pencil-and-paper assessments, which can be designed in three different forms such as, recall, recognition, and constructed answer will be discussed.

The various assessment methods such as formative assessment and summative assessment will also be discussed. The participants will learn to identify the purpose, procedures, materials, and timing of each of the stages of formative evaluation and summative evaluation. Practical suggestions for writing multiple-choice questions, essay questions, and case studies will be covered. They will learn to prepare scoring rubrics for quizzes, essays, portfolios, demonstrations, presentations, performances, exhibitions, and case studies. They will learn to use grades that stand for something clear, stable, valid, and direct enough for the students to self-correct their performance. The necessity to provide ongoing feedback for all assessment types will be also emphasized.

The participants in this module will also learn about contemporary findings on assessments such as authentic assessments that anchor testing in a meaningful and realistic way by situating the assessment in real-life context through problem solving and problem posing (Wiggins, 1998). At the end of this module, the academics should be able

to self-reflect on these questions: *Why am I assessing?   What is the evidence that the students have understood the course? Did the students improve over time? Why or why not?*

4.4 Instructional design

An introduction to instructional design will be made in this module. This module comprises the entire process of analyzing learning needs and goals and the development of a delivery system to meet those needs. It includes a systematic development of instructional materials, activities, information resources, implementation, and evaluation of instructional and learner activities. The assumptions underlying instructional design such as behaviorism, cognitive theories, developmental theories, and instructional theories will be briefly discussed. The participants will also learn to develop clear and concise learning goals. The events and purpose of instructional strategy comprising introduction, body, conclusion, and assessment will be explored. Also covered in this module will be motivation in instruction, delivery strategies, media selection, media development, and grouping strategies in classrooms. Questions to be discussed include: *What does the normal curve mean*; *with a few students learning very well, few students in the middle, and a few learning less well?*

4.5 Instructional technology

This workshop series will cover the design and implementation of technology in instructional environments. The instructional environments include the physical, social, and cognitive aspects in which students learn. The participants will learn the theory and practice of designing technology for application in instructional environments. The participants will also learn to identify, critically analyze, and implement available technology according to the instructional needs. The participants in this workshop will be exposed to the various issues such as the impact of instructional technology on education, the challenges faced by academics in keeping up with instructional technology, and the emerging trends in instructional technology. Participants in this course will design an interactive multimedia courseware to be implemented in their courses.

4.6 Learning from the teaching practice and improving teaching

Teachers learn from their own practices. According to Shulman (1999), learning is least useful when it is private and hidden; it is most powerful when it becomes public and communal. Learning flourishes when we take what we think we know and offer it as community property among fellow learners so that it can be tested, examined, challenged, and improved before we internalize it. This workshop series will explore action research as a research method so that as reflective practitioners the academics can learn from their own teaching practices. Action research may come in the form of creating journals, essays, classroom studies, and oral inquiry processes. Other avenues for learning that the

participants will be exposed to will include portfolio development, structured observation and analyses of videotaped teaching and learning sessions, micro-teaching in peer groups, teaching clinic where expert teachers analyze the teaching sessions of novice teachers and vice versa. From these reflective practices, the participants will be exposed to the conceptual processes on ways to improve teaching such as making choices about what should be changed and how it should be changed, implementing systematic changes, and assessing the effects of the changes made. Among the questions to be discussed are: *Why would busy faculty members want to pursue the scholarship of teaching*?

4.7 The personal philosophy of teaching

According to Silva (1999) from George Mason University, "a true scholar is one who possesses both an excellent mind and an open heart." It is assumed that participants in this module already possess deep understanding about the scholarship of teaching. The participants will learn to discover their own identity as teachers and to construct a personal philosophy of teaching. They will be facilitated to answer questions such as: *Who am I? Who should I be? Who should I be as a teacher? What does it mean to be a good teacher? What is effective teaching? What does effective teaching looks like?* These questions will be an opportunity for the participants to reflect on their identity as teachers. The concept of the scholar and scholarship will be defined and discussed. Finally, the participants will be requested to react to The Carnegie Foundation's (cited in Silva, 1999) working definition:

"The scholarship of teaching is problem posing about an issue of teaching or learning, study of the problem through methods appropriate to disciplinary epistemologies, application of results to practice, communication of results, self-reflection, and peer review."

5. Institutional commitment

Essentially, the agreements made by various departments and the institution should be clarified. The institutional commitment is crucial to the success of academic staff development programs such as the proposed workshop series because of its profound impact on the institution. Because of the efforts, financial accountability, and benefits involved, the UNIMAS management must identify and be committed to the short-term goals and long-term goals of the workshop series.

The proposed workshop series will be a joint initiative of the office of the Deputy Vice-Chancellor (Academic and Student Development) and the Faculty of Cognitive Sciences and Human Development. These two entities will work toward the common interest of advancing the quality of teaching in UNIMAS. They will be responsible for mobilizing awareness on the importance of the scholarship of teaching and for organizing the workshops and seminars.

It is expected that a pool of representatives from of each faculty will be selected to meet with these two entities to discuss the scholarship of teaching and to organize symposiums and a national conference on teaching to foster an academic culture that values effective and innovative teaching in institutions of higher learning. Regular faculty

members will be encouraged to participate in discussing and researching issues related to the improvement of teaching such as cognition and learning, assessment, instructional design, instructional technology, teacher cognition, and teacher beliefs.

6. Success factors and long-term plans

Although workshops and seminars are the most popular, they may not necessarily be the most effective (Weimer, 1990). Workshops may foster interests among academics in the bid to enhance and explore new ideas in teaching and learning, but transformation requires time, effort, and willingness to change (Chaffee & Sherr, 1992). According to Stephenson (1996), because of the subjective interpretation of "effort" and "benefit," a staff who perceives the unworthiness of the effort involved will not support the endeavor to "improve" effectively. Furthermore, many studies on teacher education in the United States of America have shown that the schoolteachers' current thinking on teaching and learning exert powerful influence on how they teach and what they learn about teaching (Borko & Putnam, 1996; Prawat, 1992). Addressing these barriers seriously is a success factor to ensure that the desired transformation would take place.

From studies conducted on teacher education, among the critical success factors for long-term change (Loucks-Horsley, Hewson, Love, & Stiles, 1998) include multiple opportunities to learn, to practice, to discuss, to interact with colleagues, and to explore new ideas. I believe these success factors are also applicable to university teachers. The academics must be exposed to multiple opportunities to learn how to teach and to continuously develop themselves as teachers. It is important that the collaborative

academic community supports the individual's efforts to discuss and interact openly with fellow colleagues about teaching, to identify methods to improve teaching, and to overcome the challenges of becoming a more effective teacher.

Sustainable behavioral change is one of the long-term goals of training. To support such sustainable growth, many institutions in America such as Indiana University at Bloomington (http://www.indiana.edu/~sotl/overview.html), Stanford University (http://ctl.stanford.edu/), University of Michigan-Ann Arbor (http://www.crlt.umich.edu), University of Wisconsin-Madison (http://www.uwli.org/index.asp), and The Carnegie Foundation (http://www.carnegiefoundation.org) have formed academies or institutional units that support the academics' overall teaching and learning needs. These academies not only conduct workshops on teaching and learning but also conduct ongoing investigations on teaching and learning as one of its core activities. I encourage the UNIMAS management to think more deeply about the sustainable transformation in teaching and learning and the ongoing instructional support needed by UNIMAS academics, which may require a more holistic long-term plan such as the foundation of an academy or institution for excellence in teaching and learning. Among the academy's possible tasks would be to:

- Develop formal and measurable methods to identify individual teaching performance.

- Integrate informed teaching performances with career progression exercises such as appraisals, promotions, and rewards.

- Train academics with the latest developments in the learning sciences and innovative technology.

- Identify timely and necessary professional development activities for all academics.

7. Conclusion

Quality in teaching leads to quality in learning. The transformational experience of the students in UNIMAS is an important outcome of the quality assurance movement in teaching. On the other hand, transformation must also occur at the individual and institutional level. UNIMAS academics and the institution must view teaching as a crucial factor to build trust among its customers, satisfaction, and perhaps prestige in the near future. Enhancing the quality of teaching is certainly a long-term professional agenda that must become a university-wide culture in UNIMAS. The deliberate contributions, the sustained efforts and the commitments at the individual and institutional level can make this happen.

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ATTITUDES OF ELT STUDENTS' ABOUT QUALITY IN EDUCATION

R. Küçüksüleymanoğlu, Ş. Zalioğlu, H. Borçbakan

Quality is a philosophy of continuous improvement, which can provide any educational institution with a set of practical tools for meeting and exceeding present and future customers' needs, wants and expectations.

After World War II, the changes taking place in quality concept and the understanding of creating human-centred quality has found the opportunity to practice in the education field. In the 21st century, there are important improvements in education system. With the globalisation, there comes a race between different education models. As a natural reason of this competition, to question the quality of university services and to document them, gain vital importance. The lessening of the ratio of the public resources given to universities causes the necessity to find out new resources and this can be obtained only with quality.

With the important changes in the university education, various systems and approaches such as accreditation, quality control and quality management appeared in the fields of performing quality activities, improving the quality continuously and documenting these with different purposes. In Turkey, there are two main applications in the university education to provide and improve quality. They are Total Quality Management (TQM) and accreditation.

Although they are perceived as two different approaches, they serve for the same target: "quality in education". The basic functions of TQM and accreditation are having

the guarantee of quality to determine the standards of quality and performance which are accepted in the name of public and improving the quality by means of evaluation.

Ideally, to acquire quality in the university is based on performing university's basic functions appropriately. According to Greenwood & Gaunt (1994), education, research and public service are the basic tasks of universities. Quality in university is provided if the function of learning can be achieved at the level of student, researcher and generally society.

The education institutions are generally interested in their own services more than customers' demands. They take the customers' needs and demands into consideration from their own point of view, but not from the customers'. They focus on what they serve rather than to whom they serve. With TQM in the education system customers' needs, attitudes and perceptions about the services given by educational institutions become the most important aspect. In order to learn customers' needs and perceptions many studies are conducted by universities and according to the results of these studies universities direct their quality and accreditation efforts.

Parallel to the quality efforts in universities in the USA and in some European countries, number of faculties and universities in Turkey also started Total Quality Management activities. Among the various customers of the higher education, the students take the first place.

Quality Efforts in Uludağ University, Turkey

Up to 1998, the ELT departments in Turkey have had different programmes. There were less methodological and education courses. Since every education faculty prepared its own curriculum, the graduate teachers were at different levels and have various qualifications but In 1998, with the start of accreditation and quality activities, a standard package programme for all education faculties was put into application by Higher Education Board. The students started to take the same courses in every Education faculty.

In Uludağ University; accreditation and TQM applications began in 1998 and great changes have been made up to now. In the university, Education Faculty, ELT Department was chosen as the pilot of the TQM efforts The number of students and instructors, physical conditions and number of researches in the department are gradually increasing after these efforts.(table 1) To enrich the human and material resources at the department is the first step of the quality efforts.

Table 1

YEARS	1998	2002
Number of students...	855	915
Number of instructors..	19	30
Number of researches (M.A. & Ph. D.)....................	8	21
Physical conditions:		

Computer...	1	14
Tape-recorder..	10	13
Over Head Projector..............................	4	8
TV..	1	1
Video..	1	1
Slide Machine..	-	2
Slides & CDs & Slides	few	more
Classroom..	8	15

Design of the study

The aim of this study is to investigate the ELT students' attitudes about their department in Uludağ University, Education Faculty, ELT Department, Turkey and to give some suggestions due to the result of the attitude scale in order to improve the quality of education.

In this study, the students of ELT (English Language Teaching) Department in Faculty of Education at Uludağ University, Bursa during the summer semester of 2001 – 2002 academic year were chosen as the subjects.

For data collection, an attitude scale was used. All the instruments were developed by the researchers based on the related empirical and theoretical review of the literature.

In the attitude scale which was developed to investigate the students' perceptions about the department, there are 41 statements on a five-point, Likert type scale ranging from strongly agree to strongly disagree (1= strongly agree, 2= agree, 3=undecided, 4= disagree, .5 = strongly disagree).The scale has 9 dimensions which are:

1) Communication   5) Educational activities

2) Problem solving   6) Physical conditions

3) Decision – making   7) Social, cultural, sports activities

4) Registration office   8) Evaluation

                                                  9)Strategic Planning

Reliability of the instrument was checked by estimating the consistency of the items in each sub-dimension by utilising the Cronbach and coefficients.

The data of the present study was collected in half an hour. In this study, the coded data was analysed by utilising descriptive statistics (frequency and percentage). For this purpose, the SSPS program was used.

Findings:

In Table 2, there are 5 statements about the perception of communication at the department.

Table 2

	Strongly Agree f %		Agree f%		Undecided f%		Disagree f%		Strongly Disagree f%	
1. I can easily talk with the lecturers whenever I need.	21	18,2	54	46,9	9	7,8	22	19,1	6	5,2
2. I can easily talk with the head of the department whenever I need.	20	17,3	38	33,0	20	17,3	30	26,0	4	3,4
3. I can easily talk with the Dean whenever I need.	6	5,2	15	13,0	40	34,7	32	27,8	19	16,5
4. I can get the sufficient use of the faculty library.	14	12,1	56	48,6	6	5,2	25	21,7	11	9,5
5. I can get the sufficient use of the	4	3,4	12	10,4	22	19,1	41	35,6	32	27,8

computer laboratory.									

65.1% of the students declared that they can easily meet with the lecturers whenever they want. Also 50 % of the students said that they can meet the head of the department when they need.

It is very important for the students to be able to see both their instructors and head of the department whenever they want and need. The main customer of the school, the student, should be able to feel at ease about communicating with the lecturers and the managers.

44.3 % of the students said that they can't meet with the Dean whenever they need. This can be seen normal as he has many official and managerial business. In the table the interesting point is that 34.7 of the students are undecided about the topic. It means during their education, they never are in touch with the Dean. But with the new administration approaches, the roles of managers have changed. Contemporarily managers prefer to manage not by sitting at their desks, but by seeing about what's going on at their organisations. Deans and other managers should get together with the students more often than before. Communication with everybody in the organisation at every circumstance is the first step of quality efforts.

60.7 % of the students said that they can use the school library in an effective way.

The development of the physical conditions of the faculty has had the very fist effect in the library. One of the most important qualities that a university should have its students acquire is to search and find out the knowledge. It is a pleasing indication that the students use the library effectively.

62.4 % of the students said that they can't use computer labs efficiently. This can be because of the lack of computers. At the department, there are only 20 computers. It is vital to reach the knowledge in order to create learning organisation. It is impossible to think of a school that has few computers or students who do not use these computers in this knowledge and technology era. It is vital to increase the number of computers at schools.

By changing the present perception of the strict educational institutions which lead individuals being dependent, suppress their creativity and oblige mechanical behaviour they should experience education as "for human" and with human" but not as "despite human". Thus, the student will be a thinking person and depending on this, he can realise what he does, why and how he does but not a person only studying for the exams (Cafoğlu, 1996:79) Technology is one of the first components of this so, Educational institutions should make most of their financial investments into the technology. Learning organisations can be formed with technology.

In the third table, there are 3 statements about the perceptions of the students on problem solving.

	Strongly Agree f %		Agree f%		Undecided f%		Disagree f%		Strongly Disagree f%	
6. My advisor tries to solve the problems I told.	19	16,5	48	41,7	10	8,6	19	16,5	16	13,9
7. Our lecturers try to solve the problems we have.	5	4,3	50	43,4	23	20,2	26	22,6	7	6,0
8. The head of the department takes	9	7,8	31	26,9	44	38,2	20	17,3	8	6,9

our advises and needs into consideration.										

Table 3.

58.2 % of the students answered that their academic supervisor tries to solve their problems. It shows that the communication between the teachers and the students is quite well. This statement is very much parallel to the first and second statements in Table 2. (This answer is surprising in the case of ELT department, because each advisor has at least 40 students.)

42.6 % of the students declared that their teachers can't solve the students' problems and 43.4 % of them said they have no idea about the statement. It shows that nearly half of the students do not communicate with their teachers when they have a problem and nearly the other half thinks that the teachers are incapable of solving the problems. The answers to that statement is inconsistent with the 6th statement.

For the statement about the wants and suggestions mentioned to the head of department, 38.2 % of the students have no idea and 24.2% of them have negative attitudes.

For the statements in Table 3, the majority of the students preferred to circle the choice of "undecided" It is very amazing and meaningful that the students preferred to circle that alternative. This indicates that they do not care the people who educate them. However, it is vital for the participants to work together to assure the quality.

In Table 4, there are statements about "decision – making".

	Strongly Agree f %	Agree f%	Undecided f%	Disagree f%	Strongly Disagree f%

9. Administrators take our opinions into consideration about the decisions on students in the department.	6	5,2	10	8,6	22	9,1	32	27,8	41	35,6
10. Our opinions on the decisions about the students in the faculty are taken into consideration.	3	2,6	5	4,3	25	21,7	37	32,1	42	36,5
11. Teachers take our opinions into consideration about the decisions in the classes.	4	3,4	46	40,0	13	11,3	26	22,6	20	17,3

Table 4.

Only 13.8 % of the students agreed that the administrators took the students' decisions about the topics related to the department, but 63.4 % of them oppose to that statement.

The results, here, are very striking and significant. Quality is what the customer wants, but as seen, the students who are the main customers of an education institution have no right to say anything about the service they take.

68.6 % claimed that their decisions are not taken into consideration about the topics related to the faculty. In Turkish higher education system, the students do not take part in the management of faculties. This is a political decision which affects the managerial quality of the faculties.

It is required to get benefit from the quality research studies at education institutions. It is essential to provide the students with the right to say what they think. Because only the ones who experience the deficiencies and expectations about the matter can know about them.

43.4 % of the students say that in the classes their opinions are taken into consideration. If the quality is imposed, it can't achieve success. In order to become a learning institution, school administration should change its focus as doing together with the students instead of doing by itself.

Table 5 is about the registration office.

	Strongly Agree f %		Agree f%		Undecided f%		Disagree f%		Strongly Disagree f%	
12. Students are welcomed in the registration office.	14	12,1	32	27,8	9	7,8	33	28,6	24	20,8
13. students' processes are done rapidly in the registration office.	10	8,6	28	24,3	7	6,0	45	39,1	21	18,2

Table 5.

49.4 % were not satisfied with the attitudes of the registration office. 57.3 % said that their work are not done quickly in the registration office.

The students indicated mostly negative opinions related with the units which are a part of the administration and which are responsible for servicing the students. The administration should educate all the sub-units which give service to the students related with this subject.

The activities of a person from the system affect each individual in the system. The quality in an educational institution is a target that can be achieved with the mutual effort of the one giving the service and the ones benefiting from this.

Table 6 is about educational activities dimension.

	Strongly Agree f %		Agree f%		Undecided f%		Disagree f%		Strongly Disagree f%	

14. I think the knowledge I had in school will be very useful in my daily life.	19	16,5	59	51,3	7	6,0	18	15,6	8	6,9
15. I believe the knowledge I had in school will be very useful in my career.	33	28,6	60	52,1	2	1,7	8	6,9	8	6,9
16. There is sufficient time for the classes to be taught well.	18	15,6	63	54,7	7	6,0	22	19,1	2	1,7
17. There is sufficient time for the practices about the subjects.	8	6,9	44	38,2	15	13,0	34	29,5	10	8,6
18. Students' opinions are taken into consideration while preparing course contents.	2	1,7	8	6,9	11	9,5	42	36,5	49	42,6
19. The classes are very enjoyable.	5	4,3	36	31,3	19	16,5	43	37,3	7	6,0
20. The lecturers use different teaching methods.	1	0,8	42	36,5	16	13,9	46	40,0	7	6,0
21. Students are given the opportunity to learn and achieve.	4	3,4	51	44,3	18	15,6	30	26,0	9	7,8
22. Students have the practice of the theoretical knowledge.	3	2,6	49	42,6	7	6,0	40	34,7	13	11,3
23. Students can freely tell our opinions and advises in the classes.	12	10,4	61	53,0	7	6,0	22	19,1	7	6,0
24. Students can freely argue with the lecturers about the subjects in classes.	12	10,4	65	56,5	14	12,1	16	13,9	4	3,4
25. The reference books are chosen suitably according to the topics.	12	10,4	65	56,5	12	10,4	18	15,6	5	4,3
26. The suitable teaching materials and tools about the subjects are used in classes.	9	7,8	52	45,2	13	11,3	30	26,0	7	6,0
27. Students can easily find the opportunity to relax between classes.	9	7,8	56	48,6	6	5,2	33	28,6	8	6,9

Table 6.

67.8 % of the students thought that the knowledge they had in school will be very useful in their future life. The high positive percentage to this question justifies the common standard programme applied at educational faculties from 1998.

70 % of the students agreed that the knowledge they had in school will be very useful in their teaching career. In this table, the 14th and 15th statements' answers are consistent.

70.3 % of the students thought that the length of the courses is sufficient. 45.1 % of the students think that there is sufficient time for the practices.

79.1 % of the students thought that during the preparation of the curriculum and course content, their opinions are not taken into consideration. The answer to this statement is very significant. Because, the student who is affected directly from the given service has no right to say anything about the content of the service and how it is going to be implemented. This is contradictory to the quality concept.

35.6 % of the students find the courses enjoyable. 46.0 % of the students think that different methods are not used during the courses. When students have a word about their own learning, they will be more successful and willing.

Administration is responsible of the institution's performance (Juran, 1998). Now, it is not enough that one person should learn in the name of the institution and list the things to be done and everybody else follows the might strategists' orders.

The continuous improvement philosophy should be internalised and supported by giving more authority to the students. The schools should focus on increasing the students' potentials by improving the interaction between the students and the teacher.

Total Quality Management assumes that students should participate actively in learning and planning-evaluating procedures of their learning.

Table 7 is about the physical conditions dimension. Universities are not only the places to educate people but they are the centres for social, cultural and sport activities.

	Strongly Agree f %		Agree f%		Undecided f%		Disagree f%		Strongly Disagree f%	
28. Students can provide our needs during the breaks.	9	7,8	63	54,7	3	2,6	27	23,4	10	8,6
29. Our school building and other physical necessities are sufficient.	8	6,9	26	22,6	15	13,0	41	35,6	22	19,1
30. Physical conditions of classes are suitable for learning.	9	7,8	51	44,3	6	5,2	30	26,0	13	11,3
31. The inside and outside of the school are clean enough.	12	10,4	64	55,6	9	7,8	17	14,7	10	8,6
32. There are enough social and cultural activities.	5	4,3	38	33,0	13	11,3	36	31,3	19	16,5
33. There are enough sports activities.	4	3,4	29	25,2	22	19,1	42	36,5	15	13,0
34. Everyone has the chance to join these activities.	7	6,0	27	23,4	35	30,4	30	26,0	13	11,3
35. The number of organisations (congress, seminars, conferences, etc.) held in school is sufficient.	2	1,7	43	37,3	16	13,9	39	33,9	12	10,4

Table 7.

54.7 % thought that school building and other physical conditions are not sufficient. 9 % of the students claimed that the classes are suitable for the courses. 66 % think that the school is clean. 47.8 % preferred to say that the number of social and cultural activities are not sufficient. 49.5 % answered that the number of sports activities

are not sufficient. 37.3 % agreed that everybody does not have the same chance to take part in the social, cultural and sports activities. 30.4 % of them have the indecisive opinion about the topic. 44.3 % of the students think that the educational activities are not sufficient. In general students are not satisfied with physical conditions.

The processes and systems out of the class affect the in class processes and systems. Although there are mega changes in communication entertainment, health and transportation services, there haven't been such enormous changes in school environment since the beginning of the century.

Table 8

	Strongly Agree f %		Agree f%		Neuter f%		Disagree f%		Strongly Disagree f%	
36. The students are assessed objectively.	4	3,4	36	31,3	24	20,8	22	19,1	24	20,8
37. The exam questions and assessments can evaluate the students' real success.	6	5,2	23	20,0	17	14,7	31	26,9	35	30,4

Table 8 is about the evaluation system in the department.

34.7 % of the students answered that the measurement and evaluation of students' success is objective. Together with the application of Total Quality Management to the educational institutions, serious discussions concerning the evaluation and assessment of the students have started. According to Deming, to achieve quality and provide its continuity, it is necessary to omit measurement and evaluation in schools.

25.2 % of the students think that the exams and other ways of evaluation measures the real success of the students.

In measuring the quality, it is high time we stopped to give tests and mass evaluation should be omitted by providing learning practices which will improve creativity and practice and result in quality behaviour.

It is a loss of time to give only tests in evaluating the knowledge of the students, because not only the validity but also the reliability of the tests are not sufficient.

Learning can be determined best by the performances the students have shown in practising their knowledge and abilities in real life. The assignments and tests that focus only on numeral data in order to measure learning and productivity do not completely reflect the students' improvement and performance. When the marks are accepted as the final product, short- term advantages take the place of long-term benefits in the investment of students and this gives harm to the productivity in the long-term. But in Turkish education system this is inapplicable.

The last dimension is about the strategic planning at the department.

	Strongly Agree f %		Agree f%		Undecided F%		Disagree f%		Strongly Disagree f%	
38. I know and appreciate my schools' values.	15	13,0	69	60,0	15	13,0	9	7,8	4	3,4
39. I know and appreciate my schools' mission.	13	11,3	56	48,6	28	24,3	11	9,5	4	3,4
40. I know and appreciate my schools' vision.	15	13,0	50	43,4	31	26,9	10	8,6	5	4,3
41. I know and appreciate my schools' policy and important strategies.	14	12,1	41	35,6	40	34,7	8	6,9	9	7,8

Table 9.

73.0 % of the students know and share the values of the faculty. 13.0 % of the students have no idea about the values. 59.9 % of the students know and share the mission of the faculty. 24.0 % of the students have no idea about the mission. 56.4 % of the students know and share the vision of the faculty. 26.9 % of the students have no idea about the vision. 47.7 % of the students know and share the basic policies and important strategies of the faculty. 34.7 % of them have no idea about the subject.

Now, the task for the schools is to educate young people who have the capacity of leading the new changes, conceive the dynamics of the changes and adapt the new situations easily. In the process of implementing TQM, it is essential to leave short –term benefits or advantages and to think in the long-term process. It is not possible to see the results in a short while by starting to apply TQM principles. Only in a decade positive results may appear. Firstly, individuals should be ready for Total Quality Management. In realising the vision, mission and the values of the department, students' participation is important. The answers in Table 9 reveal that the students conceive and share the vision, mission and values.

Suggestions

- The Dean should come together with the students more often and give them the right to have a word on faculty management. If the Dean is an educational leader more than an administrator, it is easier to practice Total Quality Management at the department.

- The finance for education should primarily be spent for technological investments. For quality, knowledge and learning organisations are a must and for them technology is a necessity.

- The communication between the teachers, managers and students is crucial. In order to have a healthy communication, the number of the students per supervisor should be lessened.

- In higher education, students should absolutely have the right to say and to act. for this, necessary changes should be made in Higher Education Institutions Law. What is more important is that university administration and academicians should get used to this idea and accept it.

- Co-operation is essential for quality. Besides administrators and academicians, other supporting units should co-operate with the students. They should remember that the reason of their working is "the students"!

- More questionnaires and interviews should be organised in order to have the students' opinions and changes should be held accordingly.

Conclusion

It is an inevitable truth that the education institutions affects all the customers; therefore, it is important to realise the expectations of the students as the main customers and direct the quality movements according to the students' needs, attitudes and perceptions.

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