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Impact : Making a difference

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Impact

Making a Difference

**Proceedings of an International Conference held at
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**Editors
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Karachi, Pakistan

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COMMONLY USED ABBREVIATIONS

ADISM	Advanced Diploma in School Management
ADP	Advanced Diploma Programme
AKDN	Aga Khan Development Network
AKES	Aga Khan Education Service
AKF	Aga Khan Foundation
AKRSP	Aga Khan Rural Support Programme
AKU-IED	Aga Khan University Institute for Educational Development
CBO	Community Based Organization
CE	Certificate in Education
CP	Course Participant
DFID	Department for International Development
FEO	Field Education Officer
HAS	Health Action Schools
IAP	International Academic Partnership
ICT	Information and Communication Technology
IPD	Institute for Professional Development
ITREB	Ismaili Tariqa and Religious Education Board
KENSIP	Kenya School Improvement Programme
LRC	Learning Resource Centre
MAP	Mathematics Association of Pakistan
MEd	Master of Education
NAEP	Northern Areas Education Project
NGO	Non-Governmental Organization
NGORC	NGO Resource Centre
NWFP	North-West Frontier Province
PDC	Professional Development Centre
PDT	Professional Development Teacher
PhD	Doctor of Philosophy (Philosophiae Doctor)
PITE	Provincial Institute for Teacher Education
PNI	Pakistan Non-Government Initiatives
PTA	Parent-Teacher Association
PTC	Primary Teachers Certificate
SAP	Social Action Programme
SIP	School Improvement Programme
SMC	School Management Committee
TRC	Teachers' Resource Centre
UNDP	United Nations Development Programme
UNESCO	United National Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
VEC	Village Education Committee
VTP	Visiting Teacher Programme

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IN SEARCH OF IMPACT: TEACHER DEVELOPMENT FOR SCHOOL IMPROVEMENT

Stephen E. Anderson
Ontario Institute for Studies in Education, University of Toronto, Canada

Introduction

I was invited to address the topic of "impact" as it relates to teacher development initiatives and school improvement. The more I reflected on this topic the more I sensed a paradox that reflects a tension between what we know about impact and the pressure and commitment we all feel to document and report evidence of impact of our efforts to improve the quality of education in the environments where we work and live. Simply stated, the paradox is this: We know a lot about the impact of teacher development and school improvement efforts in general; however, it seems that we rarely know enough about the impact of teacher development and school improvement efforts in particular. The challenge we face is to repeatedly search for evidence of impact in the context of specific programmatic and policy interventions intended to improve teaching and learning. Unlike chemistry, mixing certain elements in specific proportions does not always yield the same results. Unlike technological innovations, once a product is invented it cannot be depended upon to have the same effect in different settings, such as laundry soap. Thus, no matter how much we know about the effects of teacher development and school improvement in general, drawing from past experiences and from past research, we are always confronted with the challenge of finding evidence of impact in the context new initiatives and in different settings. Hence, the title of my address: "In Search of Impact: Teacher Development for School Improvement".

As a foreground to sharing my thoughts on this important topic, I would like to comment briefly on the broader context of impact studies in education around the world. Education systems worldwide have come under increasing pressure over the past twenty years from policy makers, taxpayers, donor agencies, parents, and educators themselves to be more accountable for the quality of teaching and learning they provide, and for the effects of costly efforts to make changes and improvements in teaching and learning. In this respect, the interest and commitment to impact studies at IED reflects a general trend.

There is another dimension to IED's interest in investigating the impact of its work,

however, which I believe is quite unique when placed in comparative perspective. I think I can best illustrate this uniqueness by drawing a comparison to my own institution. This year, all of our graduate programs in education will be subjected to external review and evaluation by the provincial Council of Graduate Studies. This happens about every five years. The Council has the authority to recommend continuation of a graduate program or to judge that a program should be discontinued if the reviewers find that the program is lacking in quality of content, capacity to deliver, or impact. Typical indicators of impact required for this sort of review include the number of graduates that have been admitted to the program, the completion rate, the time required for completion, the employment status, and publication records of graduates at the doctoral level. No one is formally responsible for tracking what happens to doctoral or masters degree students once they graduate. So, when its time for review, the faculty usually receive a message from their program coordinator or department head inviting them to submit the names of any former doctoral students in the past five years who they can locate, in what capacity they are employed, and how they might be contacted to confirm their employment status and to solicit information about publications. Nowhere in this process does anyone suggest that we should be seeking or providing any evidence that our programs and the graduates of our programs are having any impact on the quality of education in school systems, schools, or classrooms in Canada or anywhere else in the world. A similar picture could be painted for our reviews of our non-graduate continuing education programs for practicing educators in the province. The situation I describe is regarded as normal. That's what program reviews are about. And I suspect that this scenario for program reviews within our institution isn't much different than what one would encounter in university faculties of education across North America.

So when I come to IED, I look with admiration at the willingness and commitment of IED faculty and schools cooperating with IED and its Professional Development Centers (PDCs) to investigate the impact of IED's programs not only on participants' professional knowledge and skills, but also on how the knowledge and skills they acquire is put into practice in the field and with what effects on school management, teacher professionalism, classroom teaching and learning processes, and student development. In this respect I believe IED is quite unique among degree and certificate granting institutions in the world in the field of education, and that those of us from other universities have a lot to learn from IED's ongoing experience *in search of impact.* And it is precisely for this reason that I am so pleased to have the opportunity this year to collaborate with a team of IED faculty in designing and carrying out a set of impact case studies in cooperating schools in Karachi.

I'm going to divide the remainder of my talk this morning into two major topics. First, I'm going to talk about what I think I confidently know about the impact of teacher education initiatives on teachers as individuals, with an emphasis on practicing teachers. Second I'm going to extend the discussion to what I think I know about the linkages between teachers' professional development and the improvement of teaching and learning across a school for all teachers and all students, what has come to be known as "whole school improvement". I've chosen to base this on what I have learned from personal experience as a teacher-learner, and from talking with and observing classroom teachers and school leaders involved in teacher development and school activities over the past 25 years. These are the things I "confidently" know. There are certainly other things that I'm aware of because of my familiarity with research in these areas, but until I witness them myself in practice I'm reluctant to report those ideas with the same level of confidence. I suspect that my personal knowledge about teacher development impacts and their relationship to school improvement are familiar to many of you. Some of you were graduate students in my classes. Many of us read the same professional literature. In keeping with the theme of the conference, however, I'd like to invite you to consider some implications of what we know for our individual and collective searches for impact. What I propose to do is to present a series of propositions about impact, to provide some concrete illustrations as evidence of the validity of those propositions, and to reflect on the implications of each proposition for how we go about searching for impact.

Professional development and its impact on teachers

I want to focus first on the impact of professional development interventions on teachers as individuals, after which I will take up the link between individual development and school improvement as I've defined it.

Impact is incremental. For most teachers in most situations learning to put new ideas and practices into place is an incremental process. From a behavioral perspective, any instructional strategies can be broken down into smaller sequences of inter-related tasks and behaviors. This is obvious in the case of new subject area programs and materials that teachers might be expected to put into practice. However, it is also so for deceivingly simple instructional methods such as Kagan's "think-pair-share" or Hunter's advice to "check for understanding". It doesn't really matter how fully the teacher understands the overall program or teaching practice at the outset, efforts to put them into practice will normally proceed in bits and steps. In 1998 I did an evaluation of the Aga Khan Foundation's School Improvement Program in Mombasa. One of the teachers I observed

was not in a cooperating school, but had attended a SIP project workshop on English language instruction at the local teacher center. Let me describe the scenario.

> (Class 1 English) Twenty-nine children seated in groups of six to eight around four rectangular tables. Back wall covered with vocabulary, spelling, and reading charts. Word cards were strung along one wall and a vocabulary fishing game sat in a box on a small table in the back of room. The entire oral lesson was devoted to repetition of teacher-directed phrases in English. Often, the teacher directed the children to continue repeating a phrase several times, and to raise the volume of the voices with each repetition. Several times during the lesson, she interrupted choral recitation to do a whole-class round-robin with each student standing and reciting a specific phrase ("This is the top of the bottle" "I am a boy" "I am a girl"). She frequently asked the students to repeat phrases until she was satisfied with their pronunciation. Apart from English pronunciation and vocabulary, the lesson appeared to be about opposites: top and bottom, inside and outside, boy and girl. The teacher attempted to use teaching and learning aids, such as a plastic bottle passed around, children pointing to the top or bottom of the bottle as they spoke the key phrase, and children gesturing towards different objects (e.g., top of door, top of table). The children mimicked each gesture, as well as the teacher's words. The lesson had no clear introduction, development, or closure. (Anderson & Nderitu (2002), pg 175)

I'm sure this example sounds familiar to many of you. This is actually a project "success" story in terms of change. According to the teacher, before attending a project oral language instruction workshop, she would have only been observed 'saying' and the children in chorus 'repeating', with no instructional aids or supplementary vocabulary activities, such as the word game box. In her mind, the fact that she was now listening to individual responses and correcting them when necessary made her more aware of and responsive to pupil needs and progress than before, which therefore meant that the lesson was more student centered. And using objects and gestures to illustrate the meaning of words and phrases made the learning more activity-based. The teacher is obviously has a long ways to go before her pedagogy matches the kind of activity-based and student-centered learning milieu and teaching and learning processes most of us have in mind. However, I believe the steps that she has taken need to be recognized and respected as evidence of incremental change in her understanding and her practice in that direction.

What are the implications of the incremental nature of change on our search for impact? One is that our instruments for assessing and judging impact need to be open to evidence of progress towards full understanding and implementation of desired practices, and not simply hold teachers accountable for having reached the ideal or not.

Impact is developmental. Any of you who have studied with me will have been exposed to the theory of the Concerns-Based Adoption Model of teacher change developed by Gene Hall, Shirley Hord, and their associates beginning some 30 years ago at the University of Texas. Without going into great detail the basic notions are that teachers experience change as a developmental process over time in both their feelings and concerns about the change they are attempting to put into practice, and in their gradual mastery of that change over time (see Anderson, 1997 for complete explanation). I have confirmed this process in multiple studies over the years, but would like to illustrate it with an example of my own learning.

After teaching at the faculty of education at the University of Toronto for about five years I found that I was getting bored with my teaching and wanted to expand my repertoire of instructional strategies. I was exposed to Joyce and Weil's (1986) book on models of teaching by my colleague Barrie Bennett, whose work on cooperative learning with Carol Rolheiser has had a significant impact on my approach to teaching. Barrie has done more than anyone I know to promote teacher learning and integration of multiple models of teaching as the route to teaching excellence. I was particularly intrigued by a teaching strategy called concept attainment. I had a vague understanding of concept attainment after reading about it in Joyce's book, but still didn't feel ready to try it out. Then I had the opportunity to watch Barrie demonstrate it with a group of pre-service students. I liked what I saw, and thought "I can do that". Barrie generously gave me some workshop materials that he used to explain and demonstrate the components and implementation of a concept attainment lesson. Soon after this, I attempted to integrate a concept attainment activity into a lesson on professional ethics for beginning teachers. I made mistakes in the labeling of the visual materials that were critical to the success of the lesson; some examples of the concept of "ethics" that I constructed didn't generate the kinds of responses I expected from students; nor did the structured process of having students share their understanding of the concept with partners work as smoothly as hoped. From a developmental perspective I was clearly at a mechanical level of use with my concerns focused on the fundamentals of planning and implementing a concept attainment lesson. Nonetheless, I judged it a positive experience, and was determined to do it again. I repeated my "ethics" concept attainment lesson seven or eight times in

the years that followed, and learned to implement this lesson in a routine way. I "mastered" that lesson; however, I did not master the use of concept attainment. I never extended its use to other lessons where it might well have been appropriate. And eventually I came to question whether I was just using it as an interesting activity to fill time in the ethics lesson that really wasn't contributing much to adult student learning that couldn't be said directly in much shorter time with equal impact on learning. I have yet to reach the state in my use concept attainment that Joyce refers to as the "transfer of training", where my understanding and skill is at a level that enables me to selectively, creatively, and effectively use concept attainment whenever I teach a lesson that has learning objectives that could be well taught with that method.

What are the implications of the developmental nature of teacher attitudes and behavior in the use of new teaching methods for our search for the impact of teacher development? One is that a complete understanding of impact needs to take into account the affective side of teacher change, not just the behavioral side. If I hadn't been bored with my teaching I probably would never have been receptive to learning and using concept attainment in the first place. Had I not had a positive feeling about my capacity to do it initially and even after my first fumbling trials I probably would've abandoned the idea early on. And if I hadn't begun to question the impact of my limited use of it in my chosen lesson, I would probably still be teaching that lesson today. On the behavioral side at different phases in my implementation of concept attainment you would have found me thinking about using it, gathering information, making plans, trying it out the first time, deciding whether to do it again, making minor refinements and repeating it until I became comfortable with the strategy in the context of that one lesson, and eventually placing the lesson and concept attainment into my inactive repertoire of instructional strategies. Thus, an accurate understanding impact in my case would need to take into account where I was developmentally in a process of learning and change.

Impact is multi-dimensional. Michael Fullan called our attention as far back as 1977 to the multi-dimensional nature of teacher change. In simple terms he stated that innovation implementation by teachers can involve a mixture of changes in beliefs, behaviors, and materials; that some, but not all, innovations require change in all three dimensions, and that teachers confronted with complex innovations may implement some dimensions of the change but not others. Sometimes this is deliberate and may reflect the incremental nature of change, or adaptations that teachers make to fit their circumstances. Other times teachers may be genuinely unaware that they are only partially implementing the change, a situation Fullan described as "false clarity". Other scholars have constructed

more elaborate descriptions of the multi-dimensional character of change in practice, particularly in terms of varied areas of teaching that may be affected by a given change, such as teaching methods, grouping practices, student evaluation procedures, and so on.

I frequently witness the multi-dimensionality of teacher learning of new instructional strategies during my observations of teachers trying to use cooperative group learning. Those of you who are familiar with small group learning theory will know that an "ideal" cooperative group learning lesson would incorporate five basic elements: positive interdependence so students have to cooperate to complete the learning task, individual not just group accountability, face-to-face interaction, both academic and social goals, and opportunities for reflection on group process. Many if not most teachers beginning to use cooperative group learning will only implement some elements. Often they fail to build in individual accountability, to address the social skills that students might need to develop to work well in teams, and leave out the group processing. One of my first encounters with the reality and consequences of the multi-dimensionality of change and its relationship to "impact" on teacher development occurred in my own doctoral research in the mid-1980s. I was interviewing a lead teacher in an elementary school. She told me that several years before the school had purchased sets of materials for teaching reading to lower primary students referred to as "big books". These are big cardboard story and picture books about a meter high. This teacher had been using the big books for several years to read to children, treating them simply as oversize books that made it easier for children to see the words in teacher-led reading sessions. Then one day she attended a workshop by a reading specialist named Frank Smith in which she heard for the first time about the theory of teaching reading that was the basis for developing the big books. Her whole understanding of how the books were intended to be used to develop children's reading skills changed, and so did her use of the big books. Using Fullan's typology, the teacher initially changed the materials, but did not change either her teaching methods or her beliefs about the teaching of reading. She was partially implementing the "big books" as an innovation, but she was genuinely unaware of what she didn't know and what she wasn't doing. The initial intervention of simply providing teachers in her school with these learning materials was clearly inadequate to support their appropriate use. And that point is the key. In order to achieve the anticipated impact on student learning of particular teaching strategies and programs, it may be important that all or key dimensions of those strategies and programs be implemented and implemented well. Partial implementation often means superficial implementation that not only diminishes the impact on teachers, but also the potential benefits for students.

The implications of the multi-dimensional nature of change for understanding the impact of teacher development initiatives are two-fold. The first is that impact can always be partial vis-a-vis the full array of beliefs, methods, and materials associated with new ideas and methods that teachers are attempting to put into practice. The second is that the impact of implementing these changes in pedagogy on student learning may be dependent on how fully the innovations are implemented, in addition to teachers' understanding and skill.

Impact is needs and results embedded. Teachers do not simply accept and implement new ideas and practices in a vacuum. Doyle and Ponder's (1977) analysis of the practicality ethic that shapes teachers' responses to change 25 years ago still stands. Individually or collectively teachers will always respond to opportunities for change in light of their personal perception of the need for change. Teacher needs, however, can vary widely, including concerns about students' performance, dissatisfaction with existing teaching methods, professional curiosity, and the need to comply or at least give the appearance of complying with external pressures to change for job security. Thus, in the search for impact, consideration might well be given to teachers' sense of need for particular changes, and the extent to which those needs have been met.

My experience suggests that the most powerful needs in terms of the impact of teacher development efforts on teaching practice are those that are based on teacher concerns about student learning. Where the need is for compliance, impact is likely to be more symbolic and superficial and unlikely to be sustained if pressure for compliance has no real consequences for teachers' job security and working conditions. Impact is likely to be greater when the motive is professional curiosity, though sustained use and widespread use is likely to depend as well on the perceived results obtained from use.

Let me give two examples. The teaching strategies associated with cooperative group learning hit Ontario, Canada in a big way in the mid to late 1980s. The introduction of cooperative learning methods in teacher development workshops, courses, and summer institutes across the province coincided with talk in the media about what students in the school system then would need to know to be successful in the 21st century. The business community was very vocal about promoting an image of life long learners able to move from job to job, and about the ability to work well together in teams. The vast majority of teachers had no prior training or repertoire of strategies for helping students learn to work in small groups. My research on the impact of cooperative learning professional development initiatives in several school districts at that time revealed that teachers in some schools totally ignored the academic learning benefits associated with

cooperative learning, and focused almost exclusively on the social skills domain. In one school, the teachers developed a scope and sequence for social skills development from early to upper primary classes, and applied cooperative learning strategies as the method of instruction. Since that time, I believe teachers have become more conscious of the academic benefits associated with the appropriate use of small group learning methods, but my basic point is that the initial professional development impact was associated with teachers' practical need for a way to satisfy unmet expectations for student learning.

My second example comes for a middle school I studied in the United States. Language arts teachers in this school had invested considerable professional effort to implementing more activity-based and student-centered methods of English instruction, such as writers' workshops and novel studies, and had abandoned the more teacher-directed vocabulary drills and grammatical exercises that characterized their teaching before. However, the teachers became increasingly uncomfortable about the presence of certain students who were behind in their reading and writing skills when entering the school at grade 5, and whose performance did not improve in response to the teaching methods now in use. A couple of teachers volunteered to pilot a highly structured commercial reading program with a group of these children, and the school administration arranged to purchase the program and training for those teachers. The program was teacher-directed, drill oriented, and involved the continuous use of external incentives to motivate students. It did not at all fit with the common beliefs and understandings about teaching reading in the school at the time. However, the teachers piloting the program found that it produced dramatic positive results for the participating students. I observed and interviewed a teacher using the program and she explained that despite the clash with her beliefs and preferred instructional strategies, she was committed to continued use of the program because it worked for these students who were not succeeding with the other methods. I cite this example to emphasize that impact is not only related to whether a teacher development initiative addresses a felt need, but is also dependent on whether the changes that teachers attempt are seen to produce beneficial results for the teacher and students, and whether the personal costs for teachers are experienced as worth the effort.

What are the implications of the needs and results embedded nature of teacher development impact? One is that the nature of impact is associated with the perceived relevance of teacher development inputs to teachers' initial perceptions of need. Second is that sustained impact is highly dependent on whether implementation of teacher development inputs results in real advantages for teachers and for the learners they serve.

Impact is linked to self-confidence and professionalism. Teacher development is not

merely about changes in teachers' knowledge and practices, it is also about improving teachers' sense of professionalism and confidence in themselves as teachers. This focus of impact is certainly important because in the long run teachers' self confidence has a major influence on their commitment to teaching, teacher retention, attitudes towards continuous professional learning, willingness to collaborate on teaching and learning matters with other teachers, and willingness to accept responsibility for student learning.

A secondary school teacher I interviewed during my evaluation of school improvement at Aga Khan Mzizima Secondary School in Tanzania told me that as a result of putting into practice teaching and learning strategies introduced through school-based professional development activities, and seeing the positive impact on student learning, he now felt a more powerful sense of professional identity. He had acquired professional knowledge and skills that were special to the field of teaching, and which were not just innate qualities that some teachers are born with. Even more importantly, he could see the immediate effects of his teaching on student learning and felt he was making a difference in their learning. In his words "Now I am a teacher". In a mountainous rural area in the United States I interviewed a teacher in a school serving very disadvantaged rural children whose success at school was complicated by high poverty, poor nutrition and health care, lack of parental education, family violence, and so on. Children began school with little preparation and academic support from home, and school results in reading, writing, and mathematics were far below accepted norms. At one time there was no consistency in the language arts program between classrooms. Under the leadership of a dynamic principal the teachers voted to adopt a highly acclaimed and highly prescriptive integrated language arts program. They underwent intensive training and follow-up assistance, and all implemented the program as prescribed in the same one and a half hour time block every morning. Student performance on State mandated tests of reading and writing schools improved significantly within two-three years. I asked the teacher what she felt about the limitations of the program on her flexibility and creativity as a teacher. She responded by telling me that at teachers' college she received one half day of instruction in how to teach reading. When she got her first job the principal gave her a box and told her that was the school reading program. Many materials were missing from the box. In effect, she had no significant preparation for how to teach reading and no one questioned her capacity to do so. Professional norms of privacy inhibited her from admitting her lack of knowledge and doubts about her competence to anyone, and led her to attribute student failures to the students' background problems, not to her teaching. Her world and that of her colleagues changed once they began to implement the new literacy program, which was well grounded in research on best practices in teaching literacy. All

of a sudden they had a clear methodology for teaching reading and writing, a common language for sharing what they were doing, and were seeing immediate positive results for students. This contributed to greater confidence as teachers, a willingness to collaborate in efforts to improve student learning, and a commitment to staying on.

I believe the stories of these teachers are good reminders that when we search for impact of teacher development we need to look beyond the instrumental impact on instructional methods and beliefs, to the broader potential impacts on teacher professionalism.

In summary, understanding the impact of teacher development initiatives on teachers as individuals requires us to recognize impact as an incremental, developmental, multi-dimensional process embedded in the teacher's perceptions of the need for and the results of change, and linked to the teacher's confidence and professionalism as a teacher.

Teacher development and its impact on school improvement

I would like to shift the focus now to the relationship between teacher development inputs and school improvement. This is a critical shift I will argue, because improvement in the quality of teaching and learning on a large scale cannot be accomplished in a teacher development support system where continuous professional development is treated as an individual phenomenon left to the discretion of each teacher. As long as "schools" remain the predominant organizational form for the delivery of education and the primary and secondary school levels, it is appropriate to ask how teacher development contributes to the quality and improvement of education school-wide, and how support for teacher development can be increasingly focused and based in the realities confronted by teachers in those schools on a daily basis. By school-wide I mean that evidence of improvement and success does not just apply to isolated individuals and groups of students and teacher, but to all students and all teachers over time. Earlier this week an article appeared in the local newspaper proclaiming that 14 Pakistani students had achieved the highest positions on the Cambridge board "O" Level exams. On the same page another article lamented Pakistan's standing on an international assessment of the status of education, citing rather depressing overall enrolment and literacy rates in comparison to countries like Bangladesh and Sri Lanka. Clearly, if one were looking for evidence of impact on the quality of teaching and learning in this country of IED's inputs or the combined inputs of IED and every other teacher development institution in the country, it is not sufficient to cite the individual accomplishments of specific individuals and schools in isolation of the rest. A colleague and I recently completed a report of a study of five high performing school districts serving largely disadvantaged student

populations in the United States (Togneri and Anderson, 2002). *We called the report Beyond Islands of Excellence: What Districts Can Do to Improve Instruction and Achievement in All Schools.* While my talk today is not on school system support for school improvement, the idea in this title still applies. How does teacher development contribute to wide-scale improvement in teaching and learning for teachers and for students? I will again make several statements about the school-wide impact of teacher development, provide examples from my own experience, and comment on the implications of those statements for assessing the impact of teacher development inputs.

School-wide impact depends on shared goals for improvement in teaching and learning. For my own doctoral research I studied how teachers and principals in two elementary schools managed the implementation of multiple innovations within a two year time frame. In both schools efforts were being made to introduce activity-based learning centers into the teaching and learning process. In one school this was limited to one teacher who had developed a personal interest in learning centers and whose principal had facilitated her participation in some district professional development workshops. There was no expectation or opportunity for her share or demonstrate what she was doing with her colleagues. In the other school the teachers decided that use of learning centers would be a school priority, and the teachers within the lower primary and upper primary division met in teams to collectively develop and implement learning center units in their classrooms. Professional development time in the school was used to expose the teachers to common training in the use of centers. From the standpoint of personal implementation, the individual teacher in school one was probably more advanced in her use of centers than the teachers in school two. She developed several learning centers units integrated across all subject areas that ran for six weeks at a time over the course of the year. However, the continuity of impact on students' capacity to learn in more self-directed and integrated ways was clearly lost when students advanced to the next grade level where teachers were not approaching teaching and learning in this way. In school two teachers' commitment to shared goals for teacher learning and instruction resulted in a slower implementation process, as teachers began developing learning center units collaboratively at the rate of one a year. However, the process ensured that all teachers were becoming skilled users of learning centers, and that the benefits for students of this approach to teaching and learning were cumulative, building from one year to the next.

Of course, there are many schools that declare school-wide goals but whose leaders do not organize effective support for teachers to accomplish those goals. Shared goals for

teaching and learning provide a basis, not a guarantee for school-wide teacher development impact. The greatest potential for school-wide impact occurs when the shared goals for improvement focus on common problems in student performance.

Two implications for understanding the impact of teacher development arise from this proposition. One is to discover whether teachers voice similar goals for improvement (regardless of the presence of school goals written in school development plans). Two is to question whether teachers' professional development activities individually and collectively are aligned with the shared goals for improvement if they exist. Professional development inputs that do not support shared goals for improvement are unlikely to have much impact on teacher learning or student learning across the school as a whole.

School-wide impact results from teachers learning together. This proposition is closely linked to shared goals for teaching and learning. It implies that teachers are not only developing themselves professionally and working on similar goals, but that they are actively learning together, teaching one another, and supporting each other's learning as a whole faculty or in teams that extend to multiple classrooms across the school.

The significance of teacher collegiality for school-wide teacher learning was first emphasized in the research of Judith Warren Little (1982) and of Susan Rosenholtz (1989) in the 1980s. My own experience in schools certainly supports this proposition. I once conducted a case study of a secondary school that embarked on a long-term whole school improvement effort grounded in a set of 10 principles for teaching, learning, and school governance. As a faculty the teachers set up cross disciplinary study groups to investigate a variety of new strategies for teaching and learning associated with these principles, including student-led discussions, cooperative learning, project-based learning, curriculum integration, and the use of rubrics as a tool for assessment of student work. Each study group was responsible for sharing the results of their investigations with the rest of the faculty. From there teachers in groups began to seek professional development opportunities externally to gain expertise in these different areas. Internally they set up times for teachers with particular interest in different strategies to meet together to share their efforts and to problem solve and support one another as they gained experience and mastery in their use. These clusters of teachers became resident experts and supports for other teachers to draw upon. The school-wide impact of this collegial professional development process was evident in classrooms through out the school. While teachers adapted the strategies to their own subjects and grade levels, they actively supported each other's learning across disciplines. Prior to the initiation of this reform process, the school was in terrible shape academically, and in school climate. Student achievement

and retention improved significantly over a three to five year period of sustained instructionally-focused improvement. While the gains cannot be solely attributed to teacher development inputs and changes in pedagogy, it was evident that the impact on student learning was linked to the coherence in curriculum and teaching that grew out of the collegial approach to school improvement and teacher change.

To assess whether teacher development inputs are having an impact across the school, a first step would be to discover whether and in what ways teachers are learning together and supporting one another's learning in a school, and the connections to shared goals.

School-wide impact progressively encompasses the performance of all students and all teachers. Teacher development inputs rarely affect all school faculty and students at once. However, for teacher development to actually have an impact on overall improvement in the quality of teaching and learning in a school it must progressively extend to all teachers. Teacher development approaches that rely primarily on training key teachers or on teachers' interacting individually with external consultants are particularly vulnerable in this regard, unless organized strategies are put into place to scale up the input they have received to multiple classrooms across the school. IED's "critical mass" or "saturation" approach to teacher development in cooperating schools represents an interesting alternative to the reliance on a small number of lead teachers. Extending the reach of teacher development that is focused on shared goals for teaching and learning to all teachers also means that processes are created to educate newly appointed teachers about school goals and preferred pedagogical approaches, in order to diminish the cumulative negative effects of teacher turnover on instructional coherence.

The goal for school improvement is quality education for all students not just a privileged few. In order for this to happen, teacher development inputs need to become grounded in evidence of specific problems in student performance for specific groups of students. It may be that commonly used instructional strategies are found to be effective in terms of student results for certain students or learning objectives, but not for others. The idea then, is not to expect teachers to stop what they are doing "right" and to search for something that will work equally well for all students. That is an impossible dream. The idea is to target where expected results are not being achieved in the curriculum and across the student body, and to orient teacher development towards solving those needs. These kinds of school embedded teacher development inputs may not necessarily involve all teachers as implementers, however, they should be recognized by school faculty as contributing to a collective progressive approach to reaching and teaching all students. The example I gave earlier of a middle school where teachers identified the need to find

alternatives to existing instructional methods in reading for a specific group of failing students, and selected teachers volunteered to be trained and to pilot a special program intervention for those students exemplifies the ideal linkage between teacher development and progressively inclusive school-wide improvement in student learning.

When searching for the impact of teacher development on school improvement, look for evidence of how widely the outcomes extend to all teachers and students over time.

School-wide impact is embedded in specific curriculum and learning contexts. Teacher development that is "divorced" from the curriculum content, materials, and expectations for student learning that teachers experience on a daily basis is less likely to result in sustained change and improvements in student learning and teaching methods than professional development experiences which address the practical concerns of teachers for how to best teach particular topics and learning objectives to the kinds of students under their care. There are heated debates in the field of teacher development as to whether teachers should be expected to learn new teaching methods independent of their specific curriculum contexts, and then to creatively apply those methods to that context, or whether new instructional strategies should be presented as instruments for teaching specific curriculum content and learning objectives. While valid arguments can be made for either side, research and experience does suggest that teacher development for school-wide improvement must become increasingly embedded in teachers' curriculum context in order to have a significant sustained impact on the quality of teaching and learning.

In one of the school districts involved in my recent investigation of district support systems for instructional improvement teachers in some schools complained that the district approach was too decentralized, leaving each school to choose its own route to improvement. Teachers, principals, and schools were held accountable for annual results on state mandated standardized tests of pupil performance. Although the district office provided little district-directed professional development, it did provide financial support for schools that wanted to allow their teachers to take part in a state-sponsored professional development program that was explicitly designed to help teachers assess student progress in achieving the state curriculum objectives in language arts, and to introduce them to teaching methods appropriate to those objectives. Schools were expected to send 10 teachers at a time for the program that involved multiple sessions over the summer or during the school year. Participating schools also assigned one teacher to be a lead teacher for support at the school level. In schools where this program was being implemented the effects on teaching practice were welcomed and wide-spread.

What implication does the context embeddedness of teacher development have for understanding its impact on school improvement. Simply stated, if teacher development has had an impact on school improvement, then there must be evidence that it has, in fact, contributed to the solution of particular problems in curriculum, teaching and learning identified by teachers as hindering the success of students in achieving expected learning outcomes within their particular curriculum and learning context. Of course, it is possible to argue that change in the curriculum context is needed as well, and that it is not just about helping teachers become better and better at teaching the current curriculum.

School-wide impact is ultimately driven by sources from within the school. My final point is not necessarily an a priori condition for school improvement in the short term. Ultimately, however, the motivation to improve and to organize teacher development initiatives to support that improvement should come from within the school. External expertise and resources are often an essential source of assistance and pressure to change. The initial impetus for improvement frequently originates from the outside. The schools that I know that have achieved the deepest and widest positive impact in their efforts to improve teaching and learning, however, strategically use resources and expertise from their external environment to further their own shared goals embedded in their own needs. A key indicator of the impact of teacher development on school improvement is the extent to which the motivation and focus for change arises from inside or outside the school. The ideal is not just making change but taking charge of change.

In the second half of this presentation I have introduced a series of propositions about the relationship between in-service teacher development initiatives and whole school improvement. I argued that the very notion of school-wide improvement implies that teacher development efforts must involve and affect all teachers, and through them all students. I suggested that the chances for school-wide improvement were greater when the goals for change are commonly known and shared by faculty, when those goals and teacher development activities aligned with them are embedded in local curriculum and learning contexts, and when they are designed to resolve teaching and learning needs defined by teachers and teacher leaders within the improving schools.

One of the challenges we face is that the kinds of organizational conditions that I've outlined here do not exist in many schools. As a result, it becomes legitimate to ask whether and how the kinds of teacher development inputs introduced within a school can themselves contribute to the creation of organizational environments more conducive to school improvement. It is in that sense that several of the propositions I've put forward

about the impact of teacher development for school-wide improvement can be viewed simultaneously as a kind of impact and as a condition shaping the potential for impact.

Concluding Remarks

Let me close today by returning to the title of my address -- "In Search of Impact: Teacher Development for School Improvement" -- and to the paradox I tried to explain when I began my talk. As you can see, I think I know quite a bit about the "impact" of teacher development and its relationship to school improvement. And I've tried to justify my claims by citing personal evidence from my own experience as teacher and researcher. The problem that still confronts me, however, is that no matter how much I know from my past experience about teacher development impact in general, it does not answer the persistent question of what impact IED's programs and activities are having on improvement in the quality of teaching and learning in its cooperating schools. That answer can only be obtained by engaging in systematic enquiry, drawing upon our best knowledge of teacher change and of school improvement, as we search together for an understanding of IED's impact that is at once accurate, fair, comprehensive, and clear.

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Appendix

Figure 1: Personal Impact of Teacher Development	
Personal Impact Is…	**To Understand Impact…**
Incremental	Assess progress towards not just the attainment of standards.
Developmental	Recognize that doing something new involves a developmental progression of feelings and skills over time.
Multi-dimensional	Be sensitive to the complexity of change, partial implementation, and the implications for student learning.
Needs and results embedded	Assess impact from the perspective of teacher needs and their satisfaction.
Linked to self-confidence & professionalism	Assess impact on teacher confidence and professionalism (e.g., commitment, collegiality, participation)

Figure 2: School Improvement and the Impact of Teacher Development	
School-Wide Impact...	**To Understand Impact...**
Depends on shared goals for improvement in teaching and learning	Assess commonality of goals for improvement and their alignment with teacher development activities
Results when teachers learn together	Find out if teachers are learning together and supporting one another's learning in pursuit of shared goals for improvement
Progressively encompasses all students and all teachers	Look for evidence of how widely outcomes extend to all teachers and students over time
Is embedded in specific curriculum and learning contexts	Look for evidence that it has contributed to the solution of local problems in teaching and learning
Is ultimately driven by needs identified from within the school	Investigate the stimulus for change from inside/outside the school

MAKING A DIFFERENCE IN EDUCATION
THROUGH COMMUNITY PARTICIPATION

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Good morning colleagues, ladies and gentlemen. Assalam-o-Alaikum. This is my fourth visit to IED, and each time I come I see growth, excitement and enthusiasm. I would like to extend my formal congratulations to IED. Thank you for inviting me to your tenth birthday event, and for giving me the privilege of making this keynote address.

The theme that I will address this morning concerns 'participation'. This word is often used synonymously with 'partnership'. I will elaborate on what I see as similarities and differences between the two.

First, I would like to look at this at the macro level. In 1990 at the World Conference on Education for All in Jomtien, Thailand, the following philosophical statement was made (WCEFA Secretariat 1990, p.58).

> Partnerships at the community level … should be encouraged; they can help harmonize activities, utilize resources more effectively, and mobilize additional financial and human resources where necessary.

These are strong words and indeed we can note that the statement is constructed in heroically positive terms. Thoughts about partnerships inherently seem to be a good thing. Community also inherently seems to be good. Community has a sort of warm feeling about it, particularly if it is left vague. So one can talk about the community as if it is clear when usually it is not. One thing that we have to bear in mind is that communities can be troublesome. Communities can be a nuisance; they can get in the way; and they can obstruct things. So it is not necessarily all positive. We have to be realistic within the overall vision of what communities are and do.

In 1994, a follow up to the Jomtien Conference took place in Delhi (UNESCO 1994). At this conference, participants made the same sort of statement - that education must be a societal responsibility. The significance of that statement is that it was governments saying "we can't do it all". The role of governments in providing education, which had

increased during the 20th century, had lessened a little. Governments were saying "well, other actors are important because we can't do it all."

The UK Department for International Development (DFID) has also made statements about parents and communities, e.g. stressing the desirability of (2001, p.19):

> greater participation of parents and communities in the education of their children [which] plays a central role in stimulating education at a local level, in building pressure for improving quality, and in developing accountability.

Again, the statement sounds very acceptable at a general level; but the practice might prove problematic.

Diversity of definitions

As can be seen from the above macro-level statements, the community donkey has a heavy load on its back. Community participation is expected to achieve a great deal. In addition to international statements are many national ones. For example, a South African government White Paper (1997, pp.8-9) states that "there must be a partnership between all stakeholders… [i.e.] the state, the parents, learners, educators, other members of the community." Such statements appear for many countries. However, part of the problem concerns this word "community". Different people have different definitions of community. At least five such categories could be listed (Bray 2001, 2003):

1. geographic,
2. ethnic/racial,
3. religious,
4. school-based communities, including Parent-Teacher Associations (PTAs), and
5. communities based on shared philanthropy of various kinds (such as charities).

So, considerable diversity exists.

The changing role of the state

Half a century ago, religious groups were the ones basically providing education. The state's role in education is mainly a construction of the 19th and 20th centuries. This role was legitimised by the 1948 Universal Declaration of Human Rights, which declares

that the State should be the major provider of education.

During the second half of the 20th century the State did indeed increasingly provide education. In some countries, the State insisted that it had not only the right but also the responsibility to provide education. For example, in the USSR, the People's Republic of China and various other socialist systems, only the State was providing education. We saw a wave of that in Pakistan in 1979 when schools were nationalised.

However, towards the end of the 20th century, the State has found that the burden is too heavy. It cannot do these things without taxing people unrealistic percentages. Governments have realised that they have limited capacities, and so worldwide there is now a rolling back of the state. Privatisation has come into focus and into fashion.

The World Bank makes statements like this (1999, pp.2-3):

> Governments are becoming less the direct producers and providers …
> and more the facilitators and regulators…. In education, government still
> plays a leading role and most likely always will. But other entities are
> involved and likely will become increasingly so in the decades ahead.

There is validity in this. The statement suggests that the role of governments will shift towards monitoring and facilitation. Governments will still play leading roles in most countries; and indeed in countries where the government does not play a leading role, for example in countries like Somalia, Liberia and Sierra Leone, there is a problem. But other entities are involved and the trend is for more diversification. It is no longer a rigid system of government schools.

Types and forms of participation: Diversity and difference

What then do we mean by community participation, and what forms may it take? Figure 1 identifies eight levels of community participation. Some forms of so-called community participation are in fact one-sided while other forms are two-sided but are at the level of tokenism. Only at the top of the ladder does participation give citizen power. But then the question is whether we want to have citizen power.

Figure 1: A Ladder of Citizen Participation
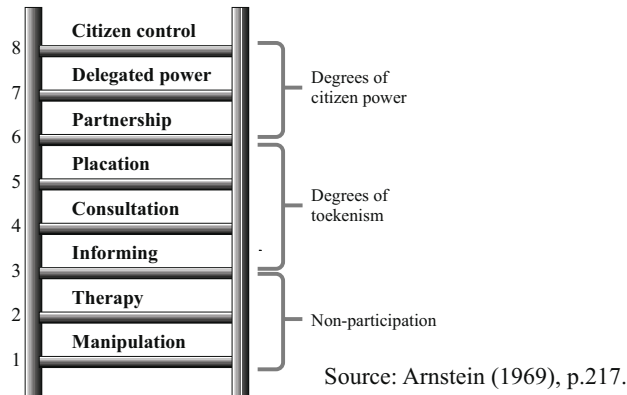
The diagram suggests that there is actually non-participation at the bottom levels. Schools and agencies can pretend to have community participation, but actually manipulate the communities. I have seen quite a few PTAs which are viewed by head teachers as cows to deliver milk. In these cases, the job of the PTA is perceived to be to raise money for the school. The middle of the ladder has degrees of tokenism. Going up the ladder involves informing the community or consulting them or placating them. We certainly see that a lot in many settings in Pakistan, Australia, UK and Botswana, among other countries. It is only at the top that we have degrees of citizen power. The word 'partnership' appears on rung 6 which seems to suggest that rungs 7 and 8 go beyond partnership.

Different models for different needs

Does this mean that we should aspire for the top rung? Does it mean that the bottom rung is bad? How far the ladder do we want to go? The answers to these questions depend on individual circumstances. The choice of the model must vary, even within a relatively small area. You may not think of it as relatively small, but let us just say that even what happens in Sindh Province in Pakistan shows considerable diversity and different dynamics with different communities.

Choice of models partly depends on objectives; but it also depends on social and political cultures. The choices of course need to be adapted. Choices sometimes change rapidly over time, and indeed policies and practices may need different balances. Balances are needed in competing potential agendas.

Also, questions of capacity arise on both sides. The community may need capacity to

work with you, and you may need capacity to work with the community.

Mechanisms

Legal frameworks are important, yet quite often they are ignored. They do set a structure of who should be in the management committee or board of governors. If you are looking at school-level mechanisms, then you have to think about various issues. You have to think about what is supposed to happen and what does happen. How is it set up? What is supposed to happen is probably set down in a legal statute somewhere. There usually would be a set of rules. If there is not, that is significant. You can think about who does what, the level of participation and the level of representation. It is dangerous to talk about communities as if they are warm, woolly and homogeneous. Communities are dominated by certain people and certain groups. Communities can be very elitist at the local level. People like us have a sort of 'trusteeship' role. We sometimes have to look beyond community and think about objectives.

Record keeping is also very important, especially with regard to money issues. One of the must fundamental aspects of setting the ground is to have good record-keeping, especially of money.

Key lessons

The following are general principles that govern partnerships:

- *Partnerships need trust.* Trust comes from a long historical legacy. It comes from relationships, attitudes and the ability to deliver. Participation perhaps does not need so much trust. Perhaps if trust is lacking, then start with participation to build up trust.
- *Partnerships need long commitment.* The difficulty with this is that things keep changing. Governments change, agencies change, and donor projects change.
- *Partnerships need clear and mutually accepted goals.* These two words - 'clear' and 'mutually accepted' - may not go together. You can have a clear goal which is not mutually accepted, or you can have a vague goal which is mutually accepted.
- *Partners must focus on both big and small pictures.* Pakistan has is a huge array of NGOs and CBOs doing different things. Some of these NGOs and CBOs are small but passionate about what they are doing. They may be doing good things, but often they don't have the bigger picture of where the society is going. Different actors can bring different perspectives. I would guess that your role, having benefited from the

IED journey, is to bring the big picture. You have been exposed to big things that may not be well known in the local context.

- *Partnerships need nurturing.* Do not expect partnerships to happen with one meeting. It needs a lot of work if you are really going to achieve partnership.
- *Partnerships are relationships between individuals as well as institutions.* Individuals matter. It is not just a matter of rhetoric and policy documents.
- *Genuine partnership involve much more than mere contribution of finance.* As mentioned schools, and particularly head teachers, often view their PTAs' role as just that for producing money. It goes much beyond this. In fact, it is a good idea if participation does not start with resources. That it starts with children and goals.

Conclusion

In conclusion, first I again congratulate IED for 10 years of great work. IED is playing a very important role in raising human capacity, in shaping ideas, and in advancing education systems. I personally feel that community participation is something that we all have to work at; but it's a complex picture. I have not delivered to you a simple recipe. There is no simple recipe. What you have to do is to find out for yourselves in your our own settings at particular points in time who you can work with and on what basis. I am confident that the motivation is there. I have talked to enough of you to see the mission, the shining eyes and the dedication, and I wish you continuing success. Community partnerships in education are important. I conclude by saying that it is not easy; but keep trying!

Thank you.

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AKU-IED: A Leader in Education Change

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Dr. Shamsh Kassim-Lakha, President, AKU; Dr. Gordon Macleod, Professor and Director, AKU-IED; Dr. Taylor, Acting Professor; Dr. Sadruddin Pardhan.

Bismillah-ur-Rahman-ur-Rahim

It is a very special honor and privilege for me to be sharing this evening with you; it is a milestone in IED's history and I can recall the formal inauguration in January, 1994 when I had the privilege of speaking on that exciting occasion. It was a time full of promise, hope, and high expectations, though not without some trepidation, because the challenge that lay before IED was formidable. Today, 10 years later, the promise has been fulfilled, the expectations have been actualized, and hope has been translated into active commitments and visible change in the classrooms that IED has impacted.

I can recall vividly, the beginning of the journey; the intense discussions on the Advisory Council and the great wealth of experience that many members brought to the foundation concepts of IED. The man who put his shoulder to the wheel was Dr. Kazim Bacchus. Although he is not here tonight, I would like to acknowledge his remarkable leadership and also the sagacious guidance given by Dr. Shamsh Kasim-Lakha.

Those early years and the continuing commitments that the faculty and IED's leadership provided have borne fruit, and IED stands as the premier institution for Teacher Education not only in Pakistan but in the region. In steering IED through that period, IED is fortunate, that in its institution building it had those two great architects.

The aim of IED is to contribute to the improvement of quality, relevance, effectiveness and outreach of educational systems in Pakistan, and to the broader goal of social development. The focus is on improving the performance of teachers through professional development leading to overall school improvement, to develop models of effective teaching, learning and school management, to test the models in classroom conditions, to disseminate results through workshops and, through research, to bring the knowledge and experience to inform and influence policy. This is a powerful and path-breaking

agenda for educational change in Pakistan.

My firm conviction has been that the 'teaching learning' process is at the core of educational development. This remains the central challenge for Pakistan, which the government, despite all its policies and rhetoric and the billions spent has not been able to address and manage.

We know that in the new endogenous growth theory, human capital has a central role in the growth process. Investment in knowledge and technology offsets the diminishing returns to physical capital; in the long term, economic returns of investment in human capital are greater than those from physical capital. Yet, in the face of all this evidence, public sector investment in Pakistan in the education sector continues to focus on physical infrastructure, paying scant attention to human resource development; and, by human resources we mean teachers, managers, administrators and planners.

Not only are education expenditures misplaced as I have just mentioned, but they are also unacceptably low; in fact Pakistan ranks amongst the lowest groups of countries in terms of education allocations as a percentage of the gross domestic product. To compound an already critical situation, during 2000-2002, real growth in public expenditure was only 1% per annum; when seen since 1989, real growth has been negative; it has been declining. This raises serious questions about priorities and the national development agenda. For the past three years, the government has been trumpeting its achievements on macro-economic stabilization, creation of fiscal space and deficit and debt reduction; but, this has come at a heavy price and at the cost of the social sectors. The total education expenditure between 1989 and 1999 was 2.40% [of the GDP] and, by 2002, it had fallen to 1%.

The bulk of these expenditures are in the primary education sector; global experience has shown repeatedly that investments in primary education are necessary, but not sufficient to lead to economic development. Empirical evidence clearly suggests that high rates of expansion at Secondary and Higher education levels are crucial for the achievement of higher per capita growth.

The secondary and tertiary levels of education are dependent upon the quality of primary school teachers which influences the quality of students coming out of the Elementary level; thus quality assumes enormous significance in terms of the outcomes and impact for the education sector. This is where the challenge lies and this is where IED has made a singular contribution by demonstrating, through its programs, that if educators (teachers,

curriculum developers, managers, supervisors) are engaged through processes of relevance they can begin to change.

For me, the indicator of real success is if, as a result of IED's training programs, the public sector schools begin to manifest quality improvements and improved student learning. And this has happened! The dynamics of the government school teacher, learning coordinator and district officer learning, interacting and participating with private sector counterparts, professional educators, and international experts has catalyzed and changed their behaviour, attitudes and practices.

IED's achievements are acknowledged and its teacher education paradigms are now a cornerstone for school improvement programs. Though IED's outreach may be limited based on the cautious and conservative approach that has been adopted, I endorse the rigour, the 'test', 'modify' and 'apply' strategy; racing to scale up is not necessarily the advisable route. Pakistan's education history is replete with innovations and experiments, either abandoned due to regime change or scaled up before sufficient experience is in place. So, while IED may not yet be changing thousands of primary schools across the country, it has shown demonstrable success in parts of Sindh, Baluchistan and the Northern Areas.

From 14 cooperating schools in 1993, there are 40 in 2003. From 21 MEd graduates in 1995, there are today 120 men and 120 women in the MEd program; more than 6000 teachers and 200,000 students have been impacted through 1200 VTs. In addition there are 200 teachers who have completed the Certificate program and 200 Diploma holders. IED's programs have reached forums in a large number of countries - including Syria, Malaysia, China, USA, UK, Uganda, Kenya, Zanzibar, Sri Lanka, Bangladesh, and Tajikistan.

Evaluating and documenting the impact of IED's work is essential. I would leave that as an ongoing activity for Dr. Gordon Macleod to consider. Because effective practice can influence policy and certainly Pakistan's education system is in dire need of "demonstrated best practice rooted in the local context".

IED must not only continue to build up on the strong foundations it has laid but also disperse the seeds from its tree of learning widely across the education landscape.

IED is a 'partner of choice' for developing countries; the interest expressed by universities of Toronto and Oxford in expanding their linkage program is a celebration and

acknowledgment of IED's effectiveness and the maintenance of high standards of professional excellence. The Chinese have many wise sayings; tonight, I would like to share with you one that only affirms what we are all dedicating our lives to:

> If you plan for a year, plant a seed.
> If for ten years, plant a tree.
> If for a hundred years, teach the people.
> When you plant a seed once, you reap a simple harvest.
> When you teach the people, you will reap a hundred harvests.
> (Kuan Chung, Chinese Philosopher)

Each one of you here tonight is a privileged member of IED's Community. I believe that the fire kindled at IED will be carried by you to light a thousand lamps and the journey of your life will be marked by a thousand stars.

I wish you all the best and all the success and thank you for giving me this opportunity to share my thoughts with you on this important anniversary event.

A PATH TOWARDS SCHOOL IMPROVEMENT AND CHANGE

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Abstract

After completion of MEd from Aga Khan University Institute for Educational development (AKU-IED), two Professional Development Teachers (PDTs), Anisa Wali Muhammad and Saima Zareen Ali, started a journey for implementing the school improvement and teacher development programmes in their context, in order to put the learning from M.Ed. programme into practice.

For this purpose, they started developing and implementing need-based professional development models for teachers of the Aga Khan schools in Karachi. All the trained AKU-IED teachers were paired up with untrained teachers. The models highlight different phases of teacher development and the utilization of trained teachers from AKU-IED Certificate programmes. The phases extended in response to the needs shared by the school, incorporating the feedback from school coordinators and school heads. Furthermore, the working of PDTs included curriculum enrichment, model lessons, assessment, workshops and upgrading existing academic programmes. The PDTs facilitated the professional development of teachers at The Aga Khan School, Garden, and Sultan Mohamed Shah Aga Khan School, with close collaboration of the head teachers.

The work made the system realize the need of PDTs for school improvement and, therefore, PDTs were recognized. This resulted into teaming up of PDTs at one platform and utilizing their individual expertise for all the schools for broadening the impact of school improvement. The major tasks included developing Curriculum Learning Area Programme, teachers training and support to schools.

Introduction

> Graduates from IED must have the intellectual stimulus to do research-they should not end up as "Pedestrian" teachers doing their day-to-day

teaching. When these graduates return to AKES, Schools, they should not be constrained, but encouraged to do research: AKES should seek to enhance their ability to do this. They should be supported with time off and extra financial support if necessary. They are expected to be imaginative and creative, to contribute to the process of change in education, and to think about issues that help enhance the quality of education. This was important for IED also. Its quality would be reflected by the work that its graduates do (His Highness Prince Karim Aga Khan, December 1996).

The primary objective of the MEd programme is to have experienced teacher educators who learn about researchers and school improvement. While implementing the learning from MEd, we, the Professional Development Teachers (PDTs), have been involved in various tasks, including teaching, mentoring, conducting seminars and workshops, setting up school-based teacher development programmes, identifying and developing resources, developing a curriculum and disseminating information. The major objectives of our work were:

- To contribute to the school improvement process through professional development of teachers;
- To develop teachers' professionally by making an improvement in their teaching-learning process.

This paper discusses PDTs models of professional development and work done for school improvement, challenges faced and lessons learnt from the working done at schools. Our work is divided into three phases, which are as follows:

Phase I (October 2000 to December 2002)

The first phase of our learning implementation was initiated with needs analyses of two Aga Khan schools in Karachi. We developed an action plan in the light of the highlighted needs of each school. As a result, we directly addressed the teachers' needs and that helped us in creating an acceptance for our programme and developing a good rapport with the teachers. We utilized 50% of our working time in schools, where we did classroom observation, co-teaching, feedback and discussion with teachers to support them in classroom practices. We also conducted need-based sessions such as lesson-planning, reflective practice, classroom management and so on. While the rest 50% of our time was spent at the Karachi Education Office for planning, reviewing and preparing feedback for teachers on a daily basis. The professional development model for S.M.S.

Primary Boys' Section and Aga Khan School Garden (Boys Section) is as follows.
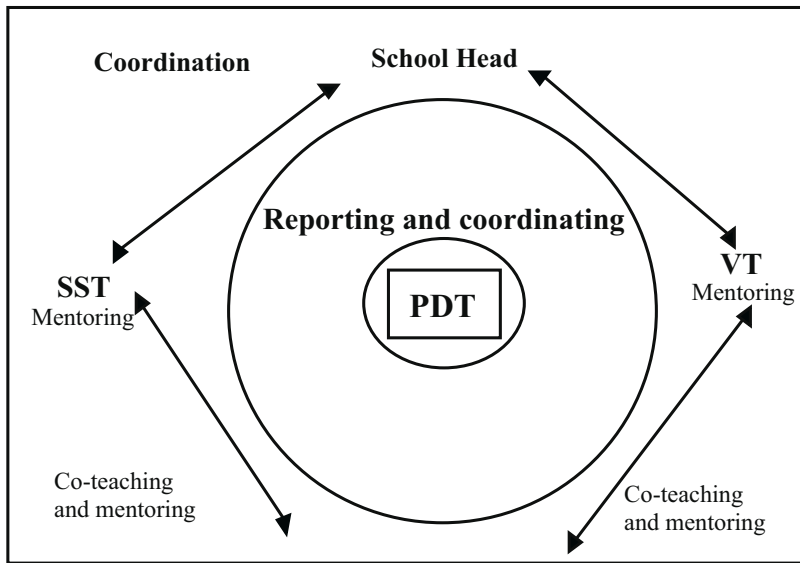
Model for Professional Development Teachers

The model shows that mentoring and teacher development was done by the PDTs through classroom observation, planning and discussion. The subject coordinator was involved throughout the process so that after the PDTs finished their work she could continue the mentoring and monitoring of teachers' growth, while the coordinator was monitoring the overall working of the focused teachers. The Subject Specialist Teacher (SST) and Visiting Teacher (VT) were paired up with the untrained teachers, so that they could support and share their learning with Non-VTs.

In addition to working on the above model, the PDTs also supported schools in monitoring of training programmes outside of Aga Khan Education Service, Pakistan (AKESP) that was called 'Modern Montessori training', and also coordinated some other activities organized by different institutes.

Lessons learnt and challenges

- This process had helped PDTs in conceptualizing the follow-up mechanism of trained teachers. In line with this, some trained teachers commented that there was no proper follow-up of their learning from different courses, however, working with PDTs helped them in sharing and applying their learning in the classroom.

- The process of sharing and planning together had also built cooperation and coordination among different focused teachers.
- Sometimes Subject Specialist Teachers (SSTs) and Visiting Teachers (VTs) had to conduct classes in place of absent teachers which affected their discussion and planning sessions with untrained teachers.. In this regard, the PDTs arranged Fridays (after the students had left) for discussion sessions.
- Some untrained teachers' reflections show that they had enhanced their learning while working with PDTs and trained teachers.
- The entire process had also helped the subject coordinator in practicing her/his role as an academic leader rather than only performing administration tasks such as distributing worksheets, checking teachers' attendance and so on.
- One of the facilitating factors in this model was that PDTs were supported by the chief academics operation officer which made the school heads allowPDTs to work on classroom improvement.
- It was a bit hectic since we had to travel everyday and also participate in the activities of Karachi Education Office. However, it was a learning period
- The teachers became involved with the PDTs. There had been many workshops and training sessions in AKES,P, however, there were some teachers who were still practicing traditional methods of teaching and the PDTs wanted those teachers to change their practices. They had learnt new ideas but they had not been able to put those into practice. They had problems of insufficient time, resources and proper and effective support from the management.
- The PDTs started to put in place a programme that closely geared to the needs of the schools and their staff.

Phase II (January-March 2002)

Based on learning from the first phase, we designed the second need-based action plan which emphasized the PDTs work on curriculum enrichment. In this phase, PDTs were school-based and spent 100% of their time in different professional development activities.

Principal

Reporting

Head
Pre-Primary
Section

Sharing and
collaborating

PDT

Sharing and
collaborating

Head
Primary Boys
Section

Mentoring and supporting

Mentoring and supporting

PRE-PRIMARY COORDINATORS

IPC & ENGLISH COORDINATOR

Monitoring

TEACHING IN THE CLASS

TEACHER 1

Collaborating and
supporting

TEACHER 2

STUDENTS

TEACHERS

Model for Professional Development Teachers (Phase II)

IPC:	**Integrated Primary Curriculum**
SST:	**Subject Specialist Teachers in primary education**
HODs:	**Head of the Department for English (coordinators)**

Model for Professional Development Teachers (Phase II)

The above model explains that the PDTs reported directly to the principal and closely collaborated with school heads at every stage of their work. For this purpose, weekly meetings were held.

In this model, PDTs continued working as teachers and teacher educators. PDTs focused on subject coordinators and teachers. They supported them in the class as observers and co-teachers, as well as in planning. In addition, PDTs had specific hours of classroom teaching in which different teachers were allowed to learn. This model also emphasized the professional development of coordinators so that they could continue their work effectively with their subject teachers. Coordinators were exposed to a variety of readings, monitoring ways and techniques for effective classroom observation and provided feedback to teachers through their reflections. They were patronized by the PDTs at every step.

PDTs also worked for proper implementation and curriculum enrichment of Oxford Reading Tree (ORT). In this process of curriculum enrichment, teachers worked closely with the PDTs. The curriculum became an example for the other two schools and was highly appreciated. At times it was challenging to convince the heads of a school to let the teachers learn and work freely, however, it was due to the support of the then principal that the PDTs continued their work. This model was in practice by each PDT at different schools. Besides, the implementation and monitoring of a project called 'Concentrated Language Encountered' was also done by a PDT.

The major elements of the work were pre-conference, post-conference, co-planning, co-teaching, lesson demonstrations and need-based sessions for all the staff. This turned into a systematic support to improve teachers' classroom practices. Moreover, this process also helped develop a very good rapport with the teachers and they came up with issues and problems and discussed them candidly. We analysed the reason of not having any reporting relations with them. On the request of heads, we did not involve them in appraisal practices that would have really built a good relationship and rapport with the teachers.

Lessons learnt and challenges

- It was learnt that teamwork has great importance and the PDTs who were working in different capacities should come forward and work together to support school-based programmes.
- We did not have any particular room to sit and work, however, we were provided space later on.
- Most of the time PDTs were asking for working facilities, such as separate rooms for discussions with teachers, and heads were made to realize that.
- At times PDTs had to report to multiple bosses and that was a big challenge for them.
- Need-based programmes should be developed and effective follow-up strategies should be designed so that implementation of the programmes can be measured.
- Management should take serious interest in training programmes and plan accordingly before sending teachers for any kind of training.
- If possible, AKU-IED should arrange a forum where all PDTs could meet and share their experiences.
- Developing a good rapport and acceptance in the school is very crucial, which facilitates the professional development process.

Phase III (March 2002 onwards)

The last phase was the result of experience of those PDTs who were working as teacher educators and teachers (some PDTs were assigned different designations). During this period there was a change in the management and the PDTs got an opportunity to share their learning and reflections of working in the schools with the new management. In this regard, the PDTs also asked for role clarity. It was suggested that all PDTs should be stationed at one place and work for the system together rather than in isolated pockets. As a result, the PDTs were synchronized at one place, that is, the Education Office, South. For the first time they worked for the development of Learning Area Programmes (Curriculum) and its proper implementation and monitoring in the schools. In addition to this, thePDTs conducted ongoing workshops and meetings for teachers of specific learning areas.

Lessons learnt and challenges

- Initially, we faced difficulty in working on specific areas and developing leaning area programmes since we did not have a clear idea, however, readings and discussions with colleagues helped us a lot. We recommend that AKU-IED should have a specialized course in curriculum development.
- This work made us feel that we are working as real PDTs whose job is to work for school improvement and institutional development.
- We still feel that some specialized courses should be arranged for PDTs in order to upgrade their knowledge and skills.
- There is a heavy workload over the shoulders of PDTs that hinder further professional development.

HEAD TEACHER'S ROLE IN SCHOOL IMPROVEMENT

Zulfiqar Ali
AKES,P, Chitral, Pakistan

Abstract

After completion of my studies at Aga Khan University Institute for Educational Development (AKU-IED), I reported back to my parent organization Aga Khan Education Service for Pakistan in the first week of July 2002. I was posted in Aga Khan Girls High School Ovirk, Garamchashma as a headmaster on August 5, 2002. This school is situated in a very backward area of district Chitral.

After joining the school I held meetings with teachers and members of the school management committee to introduce myself and also to get their views about the future of the school. I realized after the meetings that the school management committee members (SMC), who represent the community in school, were worried about the poor performance of the high school students in external examinations.

Statistics showed very poor performance of the students in the last six years' Board examinations. I decided to work on this single issue on priority bases. I met students individually to help them improve their results in the external examinations scheduled for April 2003. I also held a series of meetings with teachers and parents in order to improve the students' results. Board's examinations were held in April this year and the results were announced in June. These results amazed all the rank and file of the area. The results were hundred percent passes with twelve percent A and forty-four percent B grades. This was a new record in the seven years history of the school.

I introduced School Improvement Plan in April this year. Under this plan teachers were asked to use Urdu or English in their daily conversation. The school library was re-activated after being in a non-functional state for the last one and a half years. Physical punishment, a cherished activity of the teachers, was banned. In addition to that many other administrative measures were announced to put the school administration on the right track. I made intervention after a long needs assessment of the school.

Things have started changing in the school. For example, the teachers have started using

Urdu and English in their classes and among themselves. Previously, the local language used to be the language of teaching. I have been helping teachers in their classroom teaching and other forums. The impact of all these things may come up in the ongoing mid-term exam results.

<div align="center">————————————</div>

Introduction

I have been working as a headmaster in one of the Aga Khan Girls High Schools in District Chitral, a small and remote district of the North West Frontier Province in Pakistan. It is a mountainous area spread out over 14,850 square kilometres. According to the government census report of 1998, the population of Chitral is 316,000 with a 35% literacy rate. Before independence, Chitral used to be among one of the five hundred and sixty princely states ruled by local rulers.

Chitral became part of Pakistan in 1969 when General Yahya Khan, then military ruler of Pakistanm announced annexation of all the princely states in Pakistan. Thus, Chitral became a district of North West Frontier Province. During the period of the State's government the autocratic rulers resisted all efforts at establishing schools in the area and only selected people of the royal family had access to education. For example, His Highness Sir Sultan Muhammad Shah, Aga Khan III, had offered financial support to the rulers of Chitral for the establishment of schools, but unfortunately the ruler of Chitral refused.

History of the school

In the early nineteen eighties, Aga Khan Education Service for Pakistan (AKESP), an important component of Aga Khan Development Network started its educational activities in district Chitral in order to supplement governments' efforts towards increasing literacy rate, especially in female sector, which was at that time alarmingly low. The AKESP initiated its activities with three major objectives: access, quality and sustainability. For the last twenty years the AKESP, with the help of the local communities, has been struggling hard to achieve these objectives. So far, the AKESP has established fifty-one regular and twenty community-based schools for females.

In spite of the fact that Chitral is one of the remotest districts of the North West Frontier Province and is situated about 400 kilometres away from the provincial capital, it stands

in the third row in the district-wise provincial literacy rate table of the Frontier Province. The credit goes to AKESP because it has not only opened a chain of schools but has also played a key role in community mobilization.

Like all other District of the province, Chitral has also been divided into seven 'tehsils' for administrative purposes. Each tehsil has its headquarter and Garamchashma, where my school exists, is the tehsil headquarter of Tehsil Lotkoh. According to the census report of the government of Pakistan the population of Tehsil Lotkoh is 37,383 (18,532 males and 18,851 females) with a 34% literacy rate.

The school where I work was started in a prayer-house in 1980 with an initial intake of 77 students, and the self-help building was inaugurated in 1985. By that time the school had ten classrooms, a well-equipped science laboratory, library, headmasters' office and a staff room. At present 396 students are enrolled in the school.

It is said that well begun is half done, but in my case, unfortunately, I had to start with a terrible experience. I joined the school on August 5, 2002 and was taken to a local police station for giving financial benefit to my students.

According to the provincial law pertaining to central examinations all the candidates appearing in the central examinations were supposed to attach four photographs with their registration forms. Just after two days of my arrival in the school, deputy head told me that a Peshawar based mobile photographer was in the village and was offering very cheap rate -- 10 passport size photos for Rs. 60 only. He further told me that a local photographer charges Rs. 115 for only four photographs. Since 95% of our students come from poor families, it was my moral responsibility to first think for students' benefit. About an hour after this discussion the mobile photographer came to our school. At first sight I recognized him because I had met him six years ago when I was the Principal of a private school and he was there pursuing the same business. Since I had trust in him and his rates were very cheap, I agreed with deputy head's suggestion of doing business with this man. He took the photos of the students in school and left after two or three hours. He left the school with the promise that he will come back with the photos and collect the charges on his return.

On Saturday, August 10, 2002, when I was walking in the main road looking for public transport to my home, all of sudden a man appeared from a shop and caught hold of my arm and dragged me inside the shop. He was not a stranger but an old friend of mine. At this point he had suffered financial loss and he was in rage. Inside the shop he abused

me and showed me a report he wanted to give to the police against me. I tried to convince him but he was not ready to listen to me and when he crossed all moral limits I left the shop telling him to do whatever he could. I then had to stand at the van stand waiting for a public transport to leave. When I was still at the van stand, a police constable came there and took me to police station for inquiry. I had to spend about an hour in the police station, answering different questions of the police officials, the reporter, and his friends. Although I won the battle but this kind of situation really disturbed me. After this day, a lobby is continuously working against me and still sending various kinds of reports to different agencies.

At the time of my posting as headmaster, a local young man was the acting head of the school and he was not happy handing over charge to me. With him were working a few very senior teachers who had spent half of their employment tenure in this school and they had their own way of teaching and learning and of running all the affairs of the school. After a week time I found out that the school was being run through self-made rules and regulation. For example, according to the service rule for the teachers, all teachers have to reach school before the general assembly time and leave the school when the last bell is rung. In this school, teachers had developed a bad habit of late arrival. I observed some senior teachers coming to school when half time of their first lesson was over and leave the school at their own will. According to the school service rule, teachers have ten casual leaves in a calendar year and our teachers used them all up in the first quarter of the year. In order to the save on casual leaves, our teachers had developed cooperative leave system. What this meant was that teachers would avail leave but their colleagues would mark them as being present in the teacher attendance register or leave the space blank till next day when the absent teachers would sign it personally.

I also observed teachers sitting in the staff room while their students waiting for them in their own classrooms. Another problem with the teachers was that they were not ready to spend even eighty percent of their time in their classes. They would come out after ten or fifteen minutes and join each other in the veranda to discuss family problems.

Under the rules Urdu and English languages should be the medium of instruction but I never saw teachers or students using Urdu language, leave aside English. Again, students were being treated like animals and their interest were never being taken into consideration.

The school library had a big lock in its door and was being used as a store for waste materials like broken furniture. The students remember last using the library about one and half years earlier when another PDT, Jannat Mubarak, was the head of the school

but it had been declared as a prohibited area for the students after her transfer from the school. When I asked my predecessor about the causes of the non-functional status of the library he told me that during ex-head's [PDT] tenure when the library was functional, many books were stolen and damaged by the students and thus, it had been closed to avoid any further loss.

Like the library, co-curricular or extra-curricular activities like quizzes, debates, parents' days or National day's celebrations had also been banned on the pretext that such activities waste teachers and students' time. There was a Master/Slave relationship among teachers and students of the school. The whole environment of the school was threatening the self-respect of the students.

The community living around the school has its own norms. Though they have full authority to interfere in the affairs of the school, they respect teachers at the cost of their children's future. They are happy because they have a high school at their doorsteps but what the school really does is not their business.

For example, since 1997, the students of this particular school have been appearing in Secondary School Certificate Exams conducted under the control of Board of Intermediate and Secondary Education Peshawar but when you look at the official result gazette you won't see even three students passing their exams with an A-grade. Teachers would blame parents for poor results and parents would put the responsibility on the teachers but they never took their concerns to the management because majority of the teachers belong to the same area where the school exists and the community member don't want to make them angry by complaining against them. Since I had just graduated from AKU-IED and had brighter ideas about teaching and learning, this situation was really embarrassing for me.

After taking charge from the ex-head I held meetings with the teachers and Members of the School Management Committee in order to share my ideas about the future of the school and learn their views. The teachers were really satisfied with their teaching and students learning. They would easily put the responsibility of poor quality on variety of factors like large classes of diverse learning groups, lack of resources and parents' carelessness. They were not ready to talk about teachers' responsibilities in helping students to improve their ability. In such an adverse situation it was useless to intervene in the established norms of the teachers. So, I decided not to make any kind of intervention in their affairs.

After consultation with teachers I started teaching English to the students of class 6th, 8th and 9th. I was not happy with the prevailing situation of the school but was silent in order to familiarize with the teachers and students before doing any kind of intervention in their affairs. I used to see students and teachers coming to school with long sticks for the purpose of punishing the students. I asked the teachers to stop beating students. Majority of the teachers resisted this small decision and told me that once we stop physical punishment, none of the students will open their books at home. Anyhow, I put ban on the use of sticks in classrooms. To implement the ban properly I snatched many sticks from the hands of students and teachers. In this part of the world teachers still use a stick as a resource and they feel very bad if they go to classes without anything to hit the students. I knew the teachers would not leave their practices easily so I told them that I shall not use stick in any of my three classes and we shall compare the results at the end of the year.

Looking at the annual result sheet I learnt a lesson that abrupt change had spoiled my students. For example, in Class 6, twenty-nine out of forty-one students and in Class 8, twelve out of thirty-one had failed their English paper. Luckily all the forty-one students of Class 9 had passed their English paper. It shows that in lower classes the students respond to punishment and when they go to high classes they understand that they have to work anyways. I was happy with the results because I had taught my students with love and honour.

In order to release the prevailing tension in the school, I suggested celebrating Quaid-e-Azam's anniversary. Again, my idea didn't sound good to some senior teachers but some assured me of extending their help. Since major repair work was going on in the school, we organized the program in the garden of one of the community members. Parents of students and other members of the community participated in the program. Students presented a colourful program and were appreciated by the participants. The Deputy District Nazim of District Chitral was the chief guest and he gifted Rupees ten thousand to the school. The school management committee used this money for maintenance purposes. My key opponent, who had reported against me in the police station, was among the audience. At the end of the program he came up on the stage and appreciated the students' performance but burst out at me in front of the large gathering. I remained calm and patient and didn't react at all. After the program, the chief guest and the members of the school management committee appreciated my cool behaviour.

It is said that misfortune never comes alone. A team of senior bureaucrats from the provincial capital paid a surprise visit to the school while all the students and teachers

were in busy in the program. Some community members and labourers working in the school told them about the program but they left in a rage. After two weeks they sent a threatening letter saying,

> In spite of prior information you closed the school and when the inspection team arrived at your institution, they found the school was closed. The Board has taken a serious notice of it. You have neither insulted the Board Inspection team, but have also not obeyed the rules/regulations. Therefore, according to Board's Calendar the Board has the right to reconsider the provisional Recognition granted to your institution.

It was a critical situation because the future of seventy-four students was at stake. Although they didn't cancel the registration, they changed our examination centre. My opponents spread a rumour in the community that the centre was changed because I failed to entertain the Boards' officials. I had to cope with these and all similar situations with a smiling face -- an important lesson I had learnt from AKU-IED.

Poor performance of the students in the central examination was one of the reasons of my posting in this particular school. The institution had expectations that I might be helpful in improving the results. This was an important and difficult issue but I accepted it as a challenge. I held a series of meetings with teachers, students and parents to find out the reasons of poor results and to find a workable solution to the problems. After these meetings I identified the following reasons for the poor performance of the students.

A: They go to the examination hall without having knowledge of the pattern of the Board's paper
B: They don't know how to solve papers
C: Teachers teaching does not match with exam requirements
D: Students don't get themselves prepared at home

To address these issues we decided to give exam to the students who were appearing in central examinations in April 2003. Question papers were written on the Boards' pattern. Ninety four percent of the students passed this exam. After the exam I went through all the papers to identify some common but major mistakes. I met all the students individually to guide them about paper writing and avoiding very common mistakes that result in low marks. In these meetings I gave targets to the students according to their capacity. For example, I asked five students to work towards an A-grade and ten students to work towards a B-grade. We also held meetings with parents as part of our efforts to improve

the students' results. Local teachers sacrificed their winter vacation and continued the classes.

Annual exam were held in March and April this year in a very tense situation. Since the Board officials were not happy with me for not entertaining them the previous year, they deputed a Board official as an inspector to keep watch on our students.

The results were announced in the second week of June and surprised all the people living in the area. All our students passed, with three students obtaining an A-grade and eleven obtaining a B-grade. It was the best result in the seven-year history of the school and was a day of great happiness for all the students, teachers and community members. I received congratulation letter from the General Manager of AKESP Chitral for the outstanding results.

In five months time I had come to the conclusion that the school affairs were not on the right track and it needed to be put on the right track by introducing new reforms. For this purpose I wrote a School Improvement Plan to share with the teachers. Finally, an important meeting of the staff was convened on April 11, 2003, to discuss the new plan. One senior official from the central office also participated in the meeting as an observer. The plan had two major parts and has been reproduced below.

School Improvement Plan for
The Aga Khan School Ovirk, Garamchashma, Chitral.

This Plan contains three parts:

1:    Academic
2:    Administrative
3:    Community Participation

Academic Measures to improve the quality of teaching and learning

Urdu and English would be the academic languages of the school. All the teachers will use Urdu and English simultaneously. They are requested to talk in Englsih among themselves and with students as frequently as possible but usage of Urdu is compulsory.

Follow schedule while giving homework and the most important thing is the proper checking of the students' work and giving proper feedback.

Detention process will be started for the students who do not do their homework or show laziness in the learning process. Under this system one teacher will stay behind after school and spend two hours more with the students so they complete their work and prepare their lessons.

Involve the students in hands on minds on activities in Science lessons and also teach social studies with the help of charts and posters. In teaching of mathematics involve students in each process and make sure that all the students understand the concepts.

Teachers of English and Urdu should teach both the subject as language. It means we should give equal attention to all the four skills (reading, writing, speaking and listening). In the traditional system we focus on only on reading and listening and forget the other two skills.

Decorate the classrooms with students' work and keep on replacing them after two weeks with new charts and posters. This will encourage the students.

Awards and achievement certificates will be given to students who stand first, second and third in primary and middle sections and also in each class. This will create a healthy competition among the students.

Physical punishment must be avoided because it is a criminal act and destroys human dignity.

Class wise Naat and speech competitions should be organized once in a month and inter-school competition will be held quarterly.

I appreciate if teachers could identify weak students in their classes so we may be able to take up the issue with their parents and adopt measures for their improvement.

Teacher should not leave the students unattended even if they are outside.

Use polite language with the students.

Teacher development is another area need to be addressed. For this purpose series of workshops would be organized and participation of teachers will be compulsory.

Headmaster would visit the classes to help teachers in teaching. It should not be taken as a threatening act.

Every teacher should identify difficult concepts and share them with the head teacher. It will be the responsibility of the head teacher to identify facilitators for the workshops.

I would request health staff of the Aga Khan Health Centre for delivering lectures on health topic twice a month.

Writing of reflective journal is really important for self-development of teachers. Write reflective journals about your teaching and share with the head.

Library will start proper functioning from April 15 and teacher should borrow books from the library for reading and also encourage your students towards the same purpose. I would appreciate if teachers make sure that the students who borrow books from the library share something from the books with the rest of the class.

Teachers are also requested to donate books for the school library.

Frequent absentees must be brought into the notice of the head teacher so the matter could be discussed with the parents of the students.

An academic committee comprising of the head teacher and SMC members would be formed to check the work of the teachers and students. They would be authorized to visit the classes and check students' work.

Extra curricular activities must be the regular part of the school.

Teachers should be creative in developing low cost no cost materials.

Administrative Measures

All the staff would follow the following Administrative Rules and Regulations.

Teachers will arrive in school ten minutes before the general assembly time and leave the school when the last bell is rung.

Three times 15 minutes late arrival in school will be counted as full day casual leave. Half an hour leave means half-day leave.

Leaving class unattended will also be counted as half-day leave.

Visiting each other classes unnecessarily is strictly prohibited. If you have any thing to ask from the teacher please knock at the door and wait for the teacher to come out.

Meeting with guests in class time will not be tolerated and therefore, request the guests either to wait till u are free or at least wait till you come out of the class.

Teachers must go back to their classes within two minutes of leaving the first class.

I would appreciate if teachers use library and read books for their development.

Schedule your programs such as congratulations, condolence and other visits after school. Please don't leave school once u sign in the attendance register. Only those female teachers who have babies of less than half a year age and they have no classes can leave after teaching their classes.

All the teachers must attend the general assembly.

Head teacher and members of the academic committee is allowed to visit the classes and observe the teacher. They are authorized to see students work.

Teachers' personal files will be maintained and all their visible mistakes will be noted there. Please keep checking your files on monthly basis.

Submit proper leave application. Teachers can avail two days sick leave without doctor's advice but leaves more than two days must be supported by physician's advice. While applying for exam leave please submit exam date sheet with the application at least three days before the actual date of the commencement of the exams.

Application for maternity leave must be addressed to FEO head but it should go through the headmaster.

No teacher is allowed to send any student on leave without bringing it to the notice of the head teacher.

Teachers must sign the attendance register in the head teacher's office as soon as they arrive in school and also at the time of leaving the school.

Community Participation

Reorganization of the School Management Committee.

Increasing the number of the female members.

Community motivation for access of students to school.

Parents Teachers Associations need to be strengthened.

Water supply for the school.

Appointment of a female deputy convener is important.

The school had its own peculiar culture and changing this culture was not an easy job. After two months of the implementation of the plan I see things changing slowly and gradually. For example, in the initial stage, the teachers felt shy while speaking in Urdu or English but now they use Urdu and English for their conversations. The school culture has changed in terms of using language. Following their teachers, the students also feel confident in speaking Urdu with their teachers and their colleagues. Not only do teachers speak Urdu among themselves but they have also made it part of their classroom teaching. I think it is also a big achievement for all the staff.

The school library, which was out of use for the last two years, has been reactivated since May this year. Students' enthusiasm for borrowing books is worth seeing and students' reflection and the book borrowing register are evidence of that.

Teachers still use physical punishment as a means for effective teaching but in far lesser degree as compared to last year (Students' reflection).

Compared to last year, teachers have now become more disciplined. For example, they take their classes at the proper time and remain in their classes till the end of the lesson. Students' work is properly displayed in the classrooms.

I hope that the impact of all these measures would come out in the form of students' achievement in the ongoing mid-term exams.

In spite of many successes stories, I have not been able to address some of the issues mentioned in the school improvement plan. For instance, due to one reason or the other, no formal steps have been taken for teachers' development. In the early stage of the implementation of this plan one workshop on lesson planning was conducted in May, but the process could not be continued. I wanted to introduce detention process as a source of punishment for the lazy students who do not work at home, but this was not allowed by senior management due to cultural bonds.

I also intended to provide on the spot, regular support to teachers in their classrooms but the extra burden of fee collection didn't allow me to fulfil my promise. In the previous years this responsibility was given to any teacher in the school, but this year the head teachers have been given the responsibility for fee collection and it eats up most of the time of the head teacher. I have also not been able to work with teachers on developing low cost/no cost materials because of the shortage of time and burden of work.

I have been facing lots of challenges during this one year. As mentioned earlier, I was taken to a local police station for doing nothing. Government bureaucrats threatened me with cancellation of the school's registration. In spite of some good work in school, senior management punished me by awarding less annual increment because I had not been able to collect fees from the students. They wanted me to use force for collection of fee which was against my principles. Last month someone wrote a report against me to my senior management. In that report I was blamed for being involved in immoral activities. After investigation the report was found to be false. And this is how I am climbing the ladder of professional development.

The Certificate in Education-Dhaka Model:
A Study of Teachers' Perceptions

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Abstract

Aga Khan University-Institute for Educational Development's (AKU-IED) recent initiatives in the framework of its school improvement programmes includes supporting its co-operating school systems to develop and run site-based in-service training programmes for teachers and school leaders rather than conduct such programmes exclusively at AKU-IED.

This study was undertaken by the professional development teachers (PDTs) of The Aga Khan School, Dhaka on one such site based training programme for teachers, The Certificate in Education (CE)-Dhaka Model.

The purpose of this study is to gain a preliminary understanding of the impact of the CE programme on the professional practices and attitudes of the graduated teachers within the context of school improvement at The Aga Khan School, Dhaka.

The study employs qualitative research methods with teacher interviews being the primary source of data collection. Two classroom observations of teachers, document analyses and meetings with school heads are also used to supplement data from the interviews.

The principal findings from the study indicate that most teachers have developed increased levels of confidence, self-assertiveness and a more reflective stance. This is demonstrated by teachers' willingness to engage students in their classrooms, utilise strategies taught in the CE programme, network with their colleagues, and collaborate with administrators towards problem-solving in their institutions.

The study also finds that teachers faced several challenges related to the implementation of CE programme learning such as the relevance of CE programme strategies, defining new roles, lack of support from stakeholders and communication gaps with programme facilitators.

Based on its findings the study recommends a consolidation and extension of the existing partnership between AKU-IED and Aga Khan Education Service, Bangladesh (AKES,B), reviewing and streamlining the role of the PDTs and the curriculum of the CE programme, identifying teacher leaders to facilitate mentoring in the schools and focusing on whole school improvement.

Introduction

This paper attempts to place this study within the context of initiatives to reconceptualize the notions and consequent strategies of in service teacher professional development in order to make it more effective. Effective teacher professional development addresses the flaws of traditional approaches, which are often criticised for being fragmented, unproductive, inefficient, unrelated to practice and lacking in intensity and follow up. (Bull et al., 1994; Corcoran, 1995; Professional Development, 1994)

We argue with support from literature that the sustainability of teacher professional development programmes depends on several factors. An important consideration to ensure sustainability includes providing the benefits of school based practice for teachers engaged in professional development initiatives. Professional and personal support for teachers after teacher training programmes in the form of facilitation by school based teacher trainers based on a collaborative structure of mentoring and peer coaching is also an important follow up strategy.

These new conceptions of in service teacher professional development are supported by Smylie & Conyers (1991), who note that such programmes are being increasingly conducted by school systems as site based programmes in partnership with institutions of higher learning, rather than being located exclusively in colleges and universities. They add that the structures of in-service training programmes are now more collaborative making schools into places where teachers not only teach but also learn from each other. The eventual objective of such efforts is to bring about change in the traditional norms of teacher isolation in relation to classroom practice and professional interactions in the school.

Hawley & Valli (1999) also make a case for effective professional development for teachers and reciprocate the sentiments expressed by Smylie and Conyers (1991). In addition they add a significant design principle of effective professional development

programmes, where they maintain that professional development needs to become an integral part of a comprehensive change process in the school, which deals with both facilitating factors and impediments to teacher and student learning.

The CE programme which can be considered a prime example of a school-university partnership between AKES,B and AKU-IED for school improvement is now at a crossroads where in order to achieve sustainability it will have to develop a strong linkage with overall school improvement efforts. This research, through its study of CE teachers' perceptions about the programme, is part of that larger process at AKES,B to identify relevant factors and address the possibilities and challenges in strengthening the linkages between its initiatives for teacher professional development and its school improvement programme.

This study conducted by the professional development teachers of The Aga Khan School, Dhaka (AKS-D) attempts to explore the impact of the Certificate in Education programme on the professional attitudes and practices on the graduates from this programme. The study focuses on the teaching and learning experiences of these teachers after their return to their classrooms and schools.

In December of 1999 AKS-D, in partnership with AKU-IED, implemented a professional development programme for teachers presently called the Certificate in Education programme-Dhaka Model (formerly the Visiting Teacher programme).

The Certificate in Education (CE) programme conceived at AKU-IED is guided by a philosophy that teachers will become "reflective practitioners" who are engaged in continual self-inquiry. The CE programme requires facilitators and participants to reflect critically on educational theory and practice. The programme was designed to facilitate teachers from different institutions and schools to develop professionally through exposure to educational issues and a wide variety of teaching and learning strategies.

The Certificate in Education-Dhaka Model while based on these principles is also an attempt to custom design this programme according to the distinctive contextual needs of AKES,B and its participants and stakeholders from visiting schools and institutions. It is a site based teacher-training programme, which focuses on achieving professional growth of teachers through integrating theory, practice with active links to a network of schools within Dhaka city. The programme comprises three components during its six-month duration. The first & third components are held during the summer & winter breaks of the AKS-D. These follow a workshop-based approach where teachers are

exposed to teaching strategies and learning opportunities over a period of three weeks. Examples of topics taught in the CE programme range from general awareness about building a personal vision of education, knowledge of the curriculum, child development and learning styles, to reflective practice.

The second component of the programme held during the instructional days of the school year provides teachers with the opportunities for fieldwork & weekly seminars to practice the teaching strategies learnt in the workshop and seminars in first component, in their own contexts and classrooms. Thus the course participants get significant benefits of a site based training programme, a crucial missing element of university based teacher professional development programmes.

The Certificate in Education programme is an important component of professional development and school improvement efforts at AKS-D which also includes the Certificate in Educational Management, a programme for school leaders and managers. The eventual goal of such school improvement efforts is to create a centre of excellence where teachers would receive professional training and support and where its students would receive quality education. This is consistent with Guskey & Huberman (1995), who maintain that the purpose of professional development is to 'alter the professional beliefs, practices and understanding' of teachers and heads towards an articulated end which is the improvement of student learning.

Rationale and significance of the study

The purpose of conducting this study is to facilitate understanding the impact of the CE programme teaching and learning strategies on the graduated teachers in their classrooms and schools.

The study is significant because in 2002 the 3rd cohort of teachers graduated and received their certificates of completion from the CE programme. However till date no formal structure has been designed to follow up and support these graduated teachers after their return to their classrooms. A follow up programme can become an important part of ongoing professional development for these teachers to ensure sustainability of professional development and school improvement efforts at AKES,B. In order to accomplish this objective we need to gather valid and meaningful data on how the programme has impacted the professional attitudes and practices of the ex-course participants of this programme. This study is the first attempt to present the contextual realities of professional development, its success and challenges from the perspective of AKES,B and other

schools and institutions that have been part of the CE programme in Bangladesh. It is also an opportunity for the instructional team of professional development teachers to conduct research on topics related to school improvement, which is consistent with their role as conceived at AKU-IED and AKES,B. Such insights as this research study will provide are can inform present and future teacher professional development efforts in AKES,B, the AKES network and its partner institutions. The findings and analysis from this study are based on the following main and subsidiary research questions.

Main question

What are teacher's perceptions of their attempts to incorporate teaching and learning strategies from the Certificate in Education programme in their classrooms and schools?

Subsidiary questions

What professional and personal successes if any, do teachers attribute to their learning from the CE programme?

What are teacher's perceptions of challenges faced by them in attempting to incorporate CE programme learning in their classrooms and schools?

Method

The sample

Our sample size consisted of a total of nine teachers who had graduated from the CE programme. The sample selection attempted to take into account all factors that we felt were relevant to selecting a representative sample of teachers whose insights would give us the benefit of a broad range of post programme experiences in their classrooms that could answer our research questions. Therefore when selecting our sample we tried to take a broad based approach by ensuring that we had a cross section of teachers and resource persons from all contexts. For example, in addition to AKS teachers we also selected one teacher from each visiting school and institutions such as Ismaili Tariqa and Religious Educational Board, Manarat International School and College, as well as International School, Dhaka.

A second major criterion for sample selection was to have at least two representatives from each cohort of the 2000, 2001, and 2003 CE programmes. We felt that the different

lengths of teacher's classroom experiences, since their graduation from the CE programme might produce multiple perspectives, which would enrich our data. We also wanted the nine teachers in our sample to be representative of a wide range of subjects and grade levels and were selected accordingly. In addition a male teacher was selected to ensure that any possible insights on post programme experiences would also include the benefit of a male perspective.

Data collection

In order to obtain responses to the research questions a qualitative approach was adopted. Information on teachers' perceptions of the impact of the programme was gathered by means of semi-structured interviews, which was treated as the primary source of data collection. This was supplemented by secondary sources of data in the form of classroom observations, programme documents and informal meetings with school administrators. The anonymity of respondent's identities was assured by the use of pseudonyms. The data was collected over a two-week period during the academic year in the respective schools of the CE programme participants.

Data analysis

Despite being a small-scale study within a limited time frame, the various sources of data produced a fairly significant amount of data. Thus the research team found it useful to do ongoing analysis of all incoming data particularly with the data from the interviews and observations.

The research team held regular meetings to categorise and analyse the data and exchange views on subsequent courses of action. At the team meetings the data was first discussed, then categorised under the headings of several major themes. During the data analysis the research team used a combination of such pre-structured themes as well as developing themes, which emerged from the analysis, and interpretation of the data. This approach-facilitated analysis within a predetermined framework but also permitted the exploration of new perspectives based on the data.

Limitations

The limited duration and small scale of the study cannot comprehensively explore the impact of the CE programme on teachers and should be treated as an initial attempt to assess programme impact and document programme experiences. This study can be a

basis for conducting more long-term studies, in the near future.

As the study deals with the abstract concept of how teachers have implemented their learning from the CE programme, it is not always possible to delineate their learning from the past and present knowledge of these teachers, which they have experienced and learnt from sources other than the CE programme.

Findings and discussion

The analysis of the data from the from the questionnaire, interviews, and observations of our chosen sample together with documents related to the CE programme revealed the following major themes emerging from the data which are discussed below

- Notion and use of learnt programme strategies in teacher's classrooms
- Impact on classroom practice: Successes
- Challenges of implementing programme learning

Notion and use of programme strategies in teacher's classrooms

During the interviews most of the teachers in our sample identified a variety of teaching and learning strategies that they learnt from the Certificate in Education programme. These strategies ranged from instructional to classroom organisation and management, to strategies that facilitated student collaboration and learning.

Lesson planning and execution

During the observations most of the teachers submitted complete written lesson plans. In several cases the lessons were elaborate with supporting resource materials in the form of worksheets, diagrams and selected texts. A significant feature of these documented lesson plans was that they appeared to follow a uniform format and a developmental sequence where the lesson plan was divided into initial, developmental and culminating activities. In most cases the objectives stated in the lesson plans appeared to be specific and manageable and concept based. This was very similar to the formats introduced during workshops on lesson planning during the programme. The teachers seemed to be aware of the need to make their lessons appropriate for the level of the students that they were teaching and worked on the premise that well planned lessons organised their class and engaged their students more effectively.

One comment that seems important to make at this stage is whether some of the detailed and elaborate lesson plans submitted to us before our observations of the teachers in our sample could put together on a regular basis by these teachers, given their very busy schedules. Thus one could make the argument that some of these lesson plans and their implementation had been specially made for our benefit as observers and did not necessarily reflect the actual state of the teacher's classroom.

In some individual cases a partial lesson plan was submitted or there was an absence of a written lesson plan. In one case the teacher's instructions to the students appeared to constitute a basis for a lesson while in another case where there was no written lesson the instructions were not very clear. Some teachers did not have an initial explanation of what the lesson was about. This lack of clarity made it difficult to understand the objectives and outcomes of the lesson. Other teachers struggled to link their objectives with the planned learning activities and resulting time management issues. Teacher talk dominated some lessons and sometimes gave the observer the perception that he/she was attempting to pour knowledge into the students reminiscent of a traditional classroom situation.

During observations most teachers appeared to demonstrate an awareness of the need to give clear and unambiguous instructions to their students, in order to facilitate the process of learning. In this respect with some teachers in our sample group work was observed with a focus on specific concepts taught in the lesson and followed by clear instructions. Riffat, one of the teachers in the sample, highlighted the importance of using clear instructions to facilitate teaching and learning:

> I try to make my instructions more clear and check students understanding
> as to whether they can follow on not (INT #7, 23/2/03).

Another teacher asserted that because of clearer instructions her students could understand her better. The evidence of prepared lessons and focused instructions also appeared to indicate that the teachers gave importance to planning and reflecting as demonstrated by the following quote: Samina, a teacher, mentioned:

> I think before I act. I start planning before I practice it helps me to bring
> the class under control as the students pay more attention in class (INT
> #8, 24/2/03).

During the observations teachers seemed to be comfortable with using a variety of

questioning strategies involving probing and prompting and in individual cases attempting to move from close ended to more open-ended questions involving higher order thinking skills.

Collaborative student learning

Several of the teachers' observation classes also prominently featured group work, which incorporated group dynamics such as discussion, questioning, peer feedback and support. Some teachers also closely worked with their students sitting on the floor or moved around the classroom. The nurturing of students' social skills was a prominent feature found in several of the observations, this contributed to the students understanding of the expectations, processes and outcomes of group work.

Utilisation of teaching resources

Teachers appeared to have gained a new-found understanding about the importance of efficiently utilising teaching resources to facilitate the learning of their students. They were observed using a variety of educational resources, some of which were teacher prepared. The resources in most cases appeared to enhance student understanding of the topic. Besides the use of textbooks, markers and black/whiteboards, there were various visual aids to support the concept of the lesson, such as flash cards, computer worksheets etc. In this respect Nayeema, a teacher from a visiting school, mentioned:

> I use resources better than before, I look for more local aids which goes around in my mind, about how to collect and prepare LCNC materials in the class, though my other colleagues laugh at me but I do (INT #1, 23/2/03).

This opinion appeared to demonstrate a high degree of the teacher's intrinsic motivation about her learning from the CE programme. Though collecting and developing LCNC materials can be challenging but her motivation enabled her to undertake this difficult process.

Assessment and evaluation

Assessment was yet another area where in several cases the students were assessed on their product using publicly communicated criteria. During the interviews the teachers communicated an awareness of the need to develop assessment and evaluation as an

ongoing process. They talked about the importance of having a variety of assessments in the classroom using appropriate assessment tools in the form of checkpoints such as tally sheets and checklists together with student worksheets to be assessed after class.

During the observations teachers attempted to use formal and informal assessment encouraging the more introverted students to respond to questions and participate in class discussions.

Alternative perceptions

The research also found examples of teachers alternative perceptions related to the concept, processes and outcomes of implementing instructional strategies in their classrooms. For instance some teachers appeared to be using brainstorming to elicit very selective answers from the students rather than accepting all responses. Other teachers also saw cooperative learning as synonymous with using social skills and group work in the classroom. According to Rowshan, a teacher, who provided what appeared to be an example of a commonly held view:

Group work is co-operative learning (INT #4, 25/2/03).

There also appeared to be a tendency among some teachers to fix labels on teaching and learning strategies without due consideration of the principles and practice underpinning these strategies. Another teacher, Habiba, maintained that she was having a discussion class but the observation revealed that "discussion" was a one-way traffic mostly dominated by teacher talk (INT # 3 25/2/03). This observation also showed that the teacher in question had chosen a strategy, which appeared to be inconsistent with the content of the lesson. As a result restive students and time management issues were challenges faced by this teacher in the classroom. The interviews and observations of our chosen sample provided some indication that the concerned teachers could identify specific teaching and learning strategies and were prepared to use and develop them in the classroom for their students learning. The processes and outcomes from such activities appeared to depend on the perceptions and understanding of the teachers about the teaching and learning strategies from the CE-programme.

However, there appeared to be a gap between the extensive list of teaching and learning strategies listed by the teachers during the interviews and what was actually used by the teachers during the observations. The relatively limited number of strategies observed in teachers' classrooms would have to take into consideration that the two observations

were only a point in time and that several observations over a larger period might have revealed more attempts by teachers to use learnt programme strategies in their classrooms.

Impact on teacher's classroom practice: Successes

Growth of teacher's professional self-image

The data appeared to provide some strong indicators of the professional growth of teachers both in regard to how they perceived themselves as professionals and how they were in turn viewed by the respective institutions in which they served and by their colleagues. There were significant indicators that most teachers had developed to some degree a newer, stronger more professional image of themselves, which was recognised by their colleagues and stakeholders. During their interviews and observations teachers exuded a feeling of confidence and heightened self-esteem. This was complemented by a willingness to become more introspective, to try out the teaching and learning strategies learnt from the CE programme, to explore new methods of teaching and learning. Together with this reflective disposition on self came an awareness of the diversity and learning needs of the students as individuals and as members of a larger school community and a sense of "mission" to try and address these needs of students both inside and outside their classrooms.

The perception of this "new" professional image was supported by specific examples provided by teachers who mentioned that compared to her previous teaching practice she was now able to organise and plan lessons leading to better implementation. Several teachers mentioned that their communication and observation skills had improved.

In a statement representative of the experiences of several others Selina, a teacher, said:

> In my class I have observed my students work and learn together I would
> interact with individual students, now students in my class positively.
> Before I would interact with individual students now students in my class
> also teach each other (INT #5, 24/2/03).

The nature of such student led activities as individuals and in-groups prompted another teacher to say that students were now more engaged in her classroom.

Several teachers strongly maintained that as teachers they felt they had become more flexible employing a diversity of teaching strategies leading to better student motivation

and learning outcomes. The teachers also felt that they were more productive and used their energies more meaningfully.

Growth of confidence and moral authority

One of the strongest almost unanimous responses received from the teachers was their assertion that their confidence levels had grown significantly together with a sense of moral authority, creativity and better relationships with their student's. One quote from Anika, a teacher, is a typical demonstration of this new-found confidence:

> I think I have grown up a lot I am more confident and active. My self-confidence moves me forward. I can teach anywhere at any time. Anybody can come and enjoy my class and I feel happy (INT #6, 25/2/03).

Together with this new found sense of confidence and well being is a sense of her ideal image of the qualities and attitudes that a teacher should possess:

> I was not aware of the many different roles that teachers have to play in order to help the students. Not just as a teacher but a friend, a philosopher (INT #6, 25/2/03).

This new found awareness is also demonstrated in the following quote from another teacher in our sample, Nadia:

> Teaching is not just coming and lecturing, more important is what the students have learnt (INT #2, 25 /2/03).

Self-realisation appeared to be a very important aspect of the new-found awareness in some teachers as mentioned by Rowshan:

> I was rude to my students, in order to control them, but nowadays I am more open and allow students options to select the content by themselves, the students can follow their lessons better, they are more close to me (INT #4, 23/2/03).

This kind of introspection on their professional practice in their classrooms appeared to give participants new insights into their role as a teacher, as Nayeema remarked:

> Instead of giving knowledge I facilitate the students to explore new

knowledge (INT #1, 23/2/03).

Student-centred teaching

The enhanced sensitivity of the teachers also appeared to translate into a concern for their students, for instance Riffat, a teacher, mentioned:

We used to take it as a job, more of a selfish attitude, now we think we have to give a lot to the students (INT #7, 23/2/03).

Another teacher, Selina, acknowledged that she took into account student diversity in her teaching when she mentioned that she used multiple intelligences in her classroom activities.

This teacher added:

> After the CE programme I came to know that every student is an individual. Every student thinks from his/her angle. All students are not the same and the teacher needs to consider the students individuality (INT #8, 24/2/03).

For some of these teachers the willingness to develop a student-centred attitude could represent a fundamental shift in their approach to their classrooms. This is significant if we consider that a focus on students by these teachers could conceivably enhance their learning experiences and eventually go a along way in facilitating the goals of school improvement in the respective schools of these teachers.

Acknowledgement as a pedagogical leader

Several of the teachers strongly indicated that it was not only their self-image but also their professional stature that had grown both in formal and informal ways. For instance a visiting teacher Nadia mentioned that her school had acknowledged her participation in the CE-programme through the school newsletter to this she added

> Although I have not received a formal written letter the staff know I am in a better position as a result of graduation from this training programme (INT #1, 23/2/03).

Despite being a teaching assistant, the school allowed this teacher to take classes independently when the subject teacher was on leave or absent, as a demonstration of the schools new-found confidence is her abilities. This statement was supported by the school section head of this particular teacher who observed that on returning to the school the teacher in question had become more self confident and organised and was engaging in professional interaction with her colleagues. Some teachers appeared to have established a stronger professional relationship with their school administrators as highlighted by the following quote from Anika:

> I gained a lot of confidence dialoguing with the administration on matters of common concern about my teaching and the school such as assessment issues (INT #6, 25/2/03).

It is important to note that the relatively smooth "re-entry" of these programme participants was greatly facilitated by their stakeholders' knowledge and high comfort level of the goals and objectives of the CE programme. These teachers have the advantage of going back into a school improvement programme that was ready to receive them and consequently their achievements were acknowledged and they could begin to play a meaningful role in their context.

Networking with peers

This new image of teaching appeared to reach beyond a concern with self and extended to a concern for the professional growth of colleagues in this respect Nayeema stated:

> I have conducted five workshops for the teachers of the school, every month I have to arrange one workshop during the off days (INT #1, 23/2/03).

This statement was also supported by the school head of this teacher, who mentioned that she was happy about the team building efforts of her teachers who had participated in the CE programme and their mentoring role in respect of orienting newly recruited novice teachers into the school community.

In this respect Selina mentioned:

> I look for more local and no cost resources I try to use those according to my teaching topic. My other teachers/colleagues also motivated and

they follow me. (INT #5, 24/2/03)

She added: "I encourage other teachers to take the CE-programme because I think it is important that they need to learn what I have learnt" (INT #5, 24/2/03).

These multiple examples appear to emphasise a shift from an individual to a more collaborative focus among the concerned teachers based on professional platforms and dialogue such as workshops in addition to personal interaction and socialisation in their workplace. This could be interpreted at least partly due to the influences of group collaboration during the CE programme.

There was however no clear evidence that would indicate that such collaboration extended beyond some selected groups of teachers and affected the school culture as a whole. But such collaborative process once set in motion could be expected to have more positive future outcomes in terms of making a transition from an individualistic school culture to a more collaborative one.

Challenges

The sample of teachers while enthusiastic about the positive impact of classroom strategies learnt from programme also mentioned significant difficulties faced as they attempted to implement programme learning in their classroom.

Relevance of programme learning

One of the principal difficulties faced by the teachers appeared to be finding ways to effectively and meaningfully apply instructional strategies learnt from the programme in their classrooms. They called into question the applicability and relevance of specific instructional strategies learnt in the CE programme to their content, subject area and grade level. For instance Samina mentioned that she could not use some of the strategies that she had learnt in the programme such as pair-work, classroom discussion, etc.

> My experience with PM-I was mixed because I had difficulty relating it to the topics I teach, so sometimes I opt for lecture based classes which seem more appropriate given these circumstances (INT #8, 24/2/03).

In the case of this teacher the added factor of not having a peer in her subject area that had also gone through the training programme appeared to inhibit her exploration of

these strategies in the classroom. Primary teachers also expressed similar sentiments about the difficulty of applying CE programme strategies at their level. Such statements appear to indicate that closer examination of programme content vis-à-vis the subjects and grade level of teachers might be useful to make a better "fit" between teachers, their contexts and the programme.

Perception of contextual limitations

Teachers in our sample made reference to the added difficulties of trying to implement group work in what they perceived to be small and overcrowded class rooms which they maintained made it difficult to execute group learning strategies such as cooperative learning. Some teachers maintained that the concepts and structures of teaching and learning strategies in the CE-programme were not very consistent with the routine of 40-minute teaching periods. In this respect Samina mentioned:

> 40 minutes was not sufficient to meaningfully tryout the strategies. Double periods (80 minutes) would have been helpful but co-ordination with management is needed (INT #8, 24/2/03).

It may be significant to note here that most teachers in our sample when talking about contextual limitations did not talk about their efforts to overcome such limitations. This could be interpreted as a lack of awareness or the inability or unwillingness to be creative and improvise their teaching practice within their given contextual realties.

Defining new roles

Teachers on re-entering their systems were faced with having to deal with new professional albeit informal roles and their attendant challenges for themselves in attempting to disseminate their new learning to their colleagues as Nayeema eloquently put it:

> I learnt teaching methods but I can't apply those according to my own choice. Since we are all primary level teachers and work in a team and teaching methods and topics are chosen combined at the beginning of the term so I can't change those alone. I have to explain and discuss with my other teachers and my other team members until they are satisfied, I can't practice and implement myself. If I use these strategies my other colleagues will feel uncomfortable, I don't want to hurt them. I need to change my others colleagues' methods and practice, but it is time consuming and a

matter of patience though they appreciate my ideas (INT #1, 23/2/03).

The colleague who had once been a peer now took on more of an informal mentoring role because of her new experiences and learning from the CE programme, but had to tread lightly due to fear of alienating her colleagues. Such new roles required that this teacher strike a delicate balance between wanting to move ahead with exploring new avenues of teaching and carrying her colleagues with her.

Communication gap with programme facilitators

One reason cited by several of the teachers in our sample, which they felt affected their learning of programme strategies and hence its implementation was a perceived communication gap and a lack of support from the professional development teachers during and after the programme. This was strongly felt by the teachers from the visiting schools who maintained that with more support, their understanding of programme strategies would have been clearer. Such expressions of concern could be the result of a lack of consensus among programme facilitators and participants about their mutual roles. It is possible that to an extent lack of support by facilitators is a valid concern. Some teachers however also appeared to be demonstrating an over dependence on programme facilitators through their requests for more scaffolding during their professional experiences during and in the post programme period.

Lack of support from stakeholders

Another teacher indicated that a perceived lack of understanding and relevant information about the goals, objectives, processes and outcomes of the CE programme among her stakeholders meant that she received little meaningful support during the difficult process of attempting to implement programme learning in the classroom. Such attempts encountered traditional notions of equity and individualistic practices as demonstrated by the comments from Habiba:

> I can't prepare and use my learnt lesson plans in my morning formal school because my principal said if I use them, I will be disturbing my other colleagues. They don't know how to prepare lesson plans, as result parental expectation will be higher for other colleagues. This kind of attitude will hurt and discourage them (INT #3, 25/2/03).

What emerged strongly from this statement was the depth to which conservative and

traditional notions of individualistic practices were ingrained in certain contexts. This discouraged peer collaboration. This teacher stressed the need to acquaint stakeholders with the goals and objectives of the CE programmes to enable them to make an informed decision about whether the programme addressed the professional development needs of their particular context. In this respect she stated

> Please plan for training the stakeholders first before sending a candidate
> to the CE programme. (INT #3, 25/2/03)

The receptivity of this teacher's context to her new ideas from the CE programme was in sharp contrast to the positive experiences of teachers from AKS-D and other contexts and may serve to underscore the need to "prepare" the contexts before, during and after the CE programme, to facilitate the post programme experiences of these teachers.

Concerns with assessment strategies

Teachers in our sample also struggled to try and develop their learning about assessment and evaluation from the programme into strategies that worked. One teacher in this regard mentioned her difficulty in motivating students to take alternative assessments seriously. She maintained that students were "mark hungry" and only responded to numerical grades in tests and exams.

Group and pair work while a popular option especially with some teachers also presented dilemmas relating to assessment of individual contribution to the group activity as mentioned by Anika:

> It is difficult to monitor how well each individual student is working
> within the group. Sometimes the stronger students do all the work, while
> the weaker students depend on them and sit idle (INT #6, 25/2/03).

The more progressive philosophy underpinning the concept of alternative assessments introduced during the CE programme sometimes appeared to have an uneasy coexistence with the more traditional norm based assessments with which students readily understood. However the ability of teachers to structure and administer such alternative assessments in a meaningful way could also be a factor influencing their classroom experiences.

Persistence of traditional notions and practice

The interviews and observations of some teachers in our sample appeared to reveal that the challenges those teachers faced extended beyond difficulties in implementing specific strategies learnt from the programme. In at least two cases teachers appeared to be struggling to develop a more reflective approach to their teaching. In a significant statement, when asked about what challenges he faced while trying to implement programme strategies, a male teacher Salim teacher emphatically replied that he had not faced any challenges in the classroom (INT #9, 25/2/03).

A further example of this type of traditional perception seemed to be when this teacher then contradicted himself and mentioned a possible challenge that he faced with group work:

> Naughty students disturb the class when they work in the group (INT #9, 25/2/03).

The labelling of students as naughty without substantiating evidence appeared to indicate an unreflective disposition, which programme experiences had not done much to influence. Anika also appeared to contradict her own perceptions of more progressive minded teaching when she mentioned traditional methods of making students comply. During her interview she observed that her students were not good listeners and mentioned that she summarily deducted marks from students who did not listen properly.

Such data appeared to indicate that there were significant differences in the ways and the degree to which the CE programme had influenced the teaching practices and dispositions of individual teachers

Conclusions

Most teachers felt that they had "grown" and had become much more confident and self assertive, critical and reflective and now commanded more respect from their colleagues and administrators who frequently sought out the participant teachers from the CE programme to engage in professional dialogue and collaboration. Some administrators made it a point to publicly acknowledge teachers and informally delegate responsibilities for conducting workshops and play the role of a mentor for the professional development of their other colleagues in the school.

Not all teachers communicated the same sense of professional image and growth in the same degree. Some teachers appeared to be in transition from a traditional to a more progressive mode of teaching. A stated preference for student centred learning strategies were contradicted by subsequent unreflective statements together with teacher centred and disorganised practices. However even in such cases programme impact was discernible as teachers attempted to identify issues in their practice and make some degree of effort to address them.

The CE programme, Dhaka Model has high aspirations of being a comprehensive platform for professional development for AKES,B and visiting teachers from other schools. As a result the six-month long programme which involved 240 hours of contact time between programme facilitators and participants, attempted to introduce teachers to a variety of teaching and learning strategies, which were a useful experience for facilitators and participants alike. However the post programme challenges that teachers faced in the classroom when attempting to implement programme strategies may be an indication that more time was required by the participant teachers to internalise the concept, principles and application of programme learning. It is possible that too many strategies were taught in too short a period making the programme ambitious in its scope.

The CE was designated as a programme focused on primary teachers but the content of the curriculum was generic in nature with an emphasis on awareness building of different educational practices and issues. This tended more towards theory than practice. Some teachers lacked the skills to modify these strategies to make it appropriate for their level. Thus the relevance and applicability of some of the teaching and learning strategies in the CE programme to these levels as well as these teacher's abilities to adapt such strategies, bears further examination.

There appeared to be a clear sense communicated by the teachers that in specific instances the PDTs had not always fulfilled their expectations by providing them with meaningful support when they undertook to complete challenging assignments like action research during the training and in the post programme period. This feeling of exclusion was particularly emphasised by the teachers from the visiting schools. There appeared to be a lack of clarity about the roles that PDTs would play concerning the nature and extent of support provided by them to the teachers.

Some teachers appeared to implement their learning from the programme according to their alternative conceptions of the strategies taught in the CE programme. This was particularly true with respect to their understanding of specific instructional strategies

where they interpreted and used the strategy according to their own conceptions.

The learning of the teachers from the visiting schools in the CE programme could not always be applied in the contexts in which they were working. A possible lack of relevance between the CE programme, goals, objectives and strategies and the contextual realities of the visiting teachers resulted in a consequent lack of understanding and support by their stakeholders. In particular cases this meant that sometimes visiting teachers were isolated and frustrated after the end of the CE programme as they encountered challenges and resistance from stakeholders in their home contexts when they tried to implement programme learning.

Recommendations

In view of the major findings and analysis from this study we feel that the following recommendations would enhance the quality and effectiveness of programme experiences for the participants as well as contribute to efforts to streamline future professional development programmes undertaken through the partnership of AKES,B and AKU-IED.

The strongly positive indicators of professional growth for teachers who participated in the CE programme lead us to believe that professional development programmes such as the CE programme should be an ongoing partnership between AKU-IED and AKES,B in the foreseeable future. Future platforms for collaboration can include programmes for joint research and joint supervision with the goal of improving the quality of all professional development programmes. It is conceivable that in the near future the majority of teachers at AKES,B will be trained through the CE programme; this provides the partnership of AKES,B and AKU-IED with opportunities to extend their present outreach initiatives to government educational institutions as well as NGO's like BRAC.

We feel that the large number and variety of concepts, topics, issues, teaching and learning strategies introduced during the CE programme was a useful exercise for both facilitators and participants. However we also feel that on occasion the relatively large curriculum content put added pressure on facilitators to effectively share the course with participants as well as for participants to understand and internalise the course content within the stipulated time frames. In this respect a more selective approach to including strategies and skills in the curriculum would enable all concerned to have more in depth learning experiences rather than "skimming the surface" as sometimes seemed to be the case. There is a strong possibility that more time spent by programme facilitator's and CE

programme participants on individual programme topics would facilitate greater understanding leading to better implementation of programme learning in their classrooms after the end of the training programme. This could lead to more of a consensus among trainees on the concept and application of teaching and learning strategies in. the CE programme and perhaps produce fewer alternative and possibly erroneous conceptions of teaching.

During the running programme and during its post programme phase teachers have found it challenging to implement their learning. We feel that several specific strategies or a combination could address this issue and provide the teachers with much needed support. It is important that the respective roles and relationships between programme facilitators and participants be clearly defined in written form at the beginning of the programme on the basis of mutual consensus. In addition the PDTs should design schedules, to visit and support programme participants with their major assignments such as action research and lesson planning during the programme. A long-term strategy could also involve a formal follow up programme of consultation with individual teachers once they go back to their contexts. However this may be a challenging task for the PDTs due to the large numbers of teachers that have already been trained. A more feasible option would be to identify trained teachers who have demonstrated leadership qualities and support them to organise their colleagues in a mentoring/peer coaching framework and also work with individual teachers on the basis of special needs.

It is important that the programme needs to make a transition from a generic mode to more of a focus on teaching and learning strategies that address specific needs of subject teachers at different levels. Subsequent programmes could include more content-based workshops aimed at specific groups of teachers supplemented by a generic approach to raise awareness about educational issues in general.

The selection of candidates for the CE programme from visiting schools needs to be preceded by a needs analysis done by the PDTs of the professional development requirements of the teachers from the visiting schools and then modify programme curriculum content to address their needs as far as practically feasible. It is important to note that the average drop out rate of the participants from the CE programme is 13% and a review of selection criteria and procedures may be a feasible option to address this issue. In addition, a comprehensive orientation for visiting school stakeholders acquainting them with the goals, objectives and expected outcomes of the CE programme is an essential part of achieving a broad based consensus about the goals objectives for teacher professional development and consequently school improvement. If the opportunity

presents itself, stakeholders such as heads and managers could be nominated for leadership training programmes such as the GEM programme to make them more receptive to the concept of staff from their institutions attending professional development programmes at AKES,B. Such initiatives would constitute a holistic approach to professional development that attempts to focus on school improvement rather than developing individual teachers.

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EVALUATION OF OUTCOMES IN NURSING STUDENTS USING CLINICAL CONCEPT MAP CARE PLANS

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Abstract

The purpose of this paper is to evaluate the use of clinical concept map care plans in promoting critical thinking and problem solving skills compared to column nursing care plans. Concept map care plan techniques developed by Schuster (2000b, 2002) were taught to Year 1 Post-RN degree students. Students developed and used concept map care plans in clinical care of patients for 17 weeks in an Advanced Concept in Nursing course. At the completion of the clinical rotation, a questionnaire was completed by 19 students and their faculty, evaluating the use of concept map care plans. Both faculty and students found that concept map care plans were an effective strategy for becoming organized and providing holistic care. Learning difficulties regarding application of theoretical principles in clinical settings were easily recognized through use of concept map care plans by both faculty and students, which resulted in immediate feedback and enhanced learning.

Nursing educators worldwide strive to develop effective teaching strategies to guide nursing students in critically analyzing patient data and then planning nursing care. Nursing students must be prepared to meet the challenges of planning complex patient care. Nursing educators are focused on developing critical thinking skills and problem solving skills in students, and teaching students how to learn and clinically reason. With the complexity and growth of nursing knowledge, professional nurses need to develop skills to integrate knowledge of different subjects and understand relationships and linkages in patient data. One way to assist students to think critically and relate patient data meaningfully is through concept map care plans. Several authors recognize the use of concept maps as an effective method of planning patient care and enhancing critical thinking skills of nursing students (All & Havens, 1997; Baugh & Mellott 1998; Daley et al.; 1999; Schuster, 2000b; Schuster, 2002).

The idea of concept mapping is relatively new and there are few studies to evaluate the effectiveness of concept map nursing care plans as a strategy in organizing and providing

holistic care, compared to the column format of nursing care planning. Traditionally, care planning has been done using a column format. As nursing educators strive to develop effective learning strategies for organizing nursing care plans, the evaluation of new learning strategies is essential. Evaluation of concept map care plans as a method to teach care planning is the focus of this paper.

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Background: What is a concept map care plan?

The concept map care plan is based on an assessment and has 5 basic steps that are outlined below, as described by Schuster (2000, 2002). Typically, concept maps include five to six actual patient problems in about three to four pages. In this study, concept map care plan techniques were taught to year 1 Post RN degree students, also described below.

Preparing concept maps: Assessment

Before developing a concept map nursing care plan the students assessed the patients and visited the hospital to collect data on the evening before the clinical experience. The students chose their patients according to the week's focus on one of the Gordon functional health patterns covered during an earlier theoretical class. Information was collected from patient records and a brief interview with the patient. Assessment focused on the patient's reason for admission, medical diagnosis, treatments, diagnostic tests, and procedures. In preparation for clinical practice the following day, students reviewed relevant texts and prepared concept map nursing care plans and patient teaching plans.

Step 1

Based on assessment of the data collected, students developed a skeleton diagram of health problems, placing the medical diagnosis (or primary reason for being seen in the health care setting) in the middle of a blank paper. Then, patient problems (nursing diagnoses) that were patient responses to the specific reason for seeking health care were placed around the medical diagnosis, and flowed outward from the medical diagnosis like spokes on a wheel. The nursing diagnoses were numbered in order of priority as shown in Figure 1 in the appendix.

Step 2

In the second step, students categorized the data they had gathered under the identified nursing diagnoses. The students included objective data, subjective data, medications, treatments and diagnostic tests. The students repeated the data under different categories if it was relevant in more than one category. This step is shown in Figure 2 in the appendix.

Step 3

Students next drew connector lines between the nursing diagnoses to indicate relationships. Faculty verbally asked students why they had linked the relationships in that particular manner and, through this, students recognized the interrelated nature of the medical and nursing diagnoses. The result of this step is shown in Figure 3 in the appendix.

Step 4

For each of the numbered nursing diagnoses, students wrote a general patient goal and a key patient outcome. They then listed interventions that were needed to attain the identified goal. Step 4 corresponded to the planning phase of the nursing process, and included everything the student was to do with the patients including assessments, monitoring, treatments, and medications and patient teaching.

To decrease paper work, faculty asked students to provide rationale for interventions. A typical list of the resulting nursing interventions identified is shown in Figure 4 in the appendix.

Step 5

During clinical experiences, students evaluated the actual patient responses to each specific nursing intervention they had planned. Faculty orally questioned students regarding expected outcomes for the patient. Ongoing patient monitoring was recorded on the diagrams and next to each of the interventions as appropriate as shown in Figure 4 in the appendix

Figure 5 in the appendix shows a sample concept map diagram of steps 1-3 described above for a patient who suffered from health problems because of renal calculi. This is an actual map of a patient developed by a student during this study.

Just by looking at the map, many critical thinking questions could be generated by faculty for the student to address. For example:

- What was the intake and output for the past 24 hours?
- What types of IV fluids and K replacement have been prescribed?
- When was the last time the patient had anything for pain?
- The K is low, what is the relationship between K and the heart?
- How do you plan to implement teaching plans when the patient hasn't slept well?

For further information on development of concept map care plans refer to Schuster (2000b, 20002).

The concept map care plan method for teaching nursing process is in direct contrast to the column nursing care plan that requires more paper and does not permit viewing patient problems, evidence that supports these problems, and treatments succinctly on a single page as the concept map diagram allows. In the past, students in our program noted all information in columns: Column 1 was used to list assessment data that was subjective and objective; column 2 was used to note the nursing diagnoses; column 3 was reserved for patient goals and outcomes; column 4, for nursing interventions; column 5 was used to store rationales; finally, column 6 was reserved for the evaluation of the outcome objectives.

Nursing programs may vary slightly in what goes in each column, but until recently, the column format has been the typical way of teaching nursing process in the majority of nursing programs.

Study sample

The study involved 9 female students in evaluation of concept map care plans. These students ranged in age from 22 to 40 years and possessed between 3 and 15 years of nursing care experience after their graduation from the basic nursing programs. The participants' areas of work included medical surgical, pediatrics and critical care. These RN students who were returning to school to further their education were initially educated in using the column format during their RN programs and prior clinical experiences. Due to familiarity with the column format of nursing care plans, this sample of students was selected to learn and evaluate concept map nursing care plans and to compare them to the column nursing care plan format.

The participants were enrolled in an advanced concepts in nursing course that included 2 hours of theoretical education in the classroom and 9 hours of clinical time each week over a total of 17 weeks. It was the participants' first term in the 2-year Post-RN degree program at Aga Khan University School of Nursing, Pakistan.

During theory sessions, practice concept maps were developed using case studies. Each student read the case study and identified patient problems individually. Next, they shared their patient problem list with the person sitting next to them using the think-pair-share teaching technique described by Bennet et. al. (1991). Using this technique, students first think through the problem individually (the 'think' stage) and participated sharing with each other ('pair-share' method).

This strategy enables students to recognize their own knowledge gaps and to learn by questioning each other. Students are then invited to share the answer with the whole class. In addition, to maintain consistency within clinical groups, clinical faculty also attended theoretical classes involving concept map care planning.

In the clinical setting, pre-conferences, individual conferences and post conferences were held on a daily basis. Pre-conferences were made up of 2 phases. The first phase took place just after the theoretical class and, during this phase, faculty and their clinical groups met for 15 - 20 minutes and focused on the objectives of the week, the selection of patients, and patient teaching activities. In the second phase, students went to the hospital on the following day to choose their patients.

During clinical time, individual conferences were held with students that enabled students and faculty to verify understanding as well as clarify and make suggestions on the concept map plans of care. Students were questioned on the plans of care they had developed, with particular attention paid to nursing interventions, scientific rationales and patient teaching. This interaction and feedback was useful for the students because they had time to make adjustments in plans prior to actually providing patient care. Faculty members were also able to monitor student progress throughout the clinical day.

A two-hour post-conference followed each clinical day. The first hour of the clinical post-conference focused on the sharing of experiences of the clinical day and included a description of both positive and negative experiences as well as how they were managed. Students shared their experiences and this allowed them to also give vent to their feelings and relieved some stress. In addition, this sharing of experiences enabled students to learn problem-solving techniques for difficult situations in an atmosphere of cooperative

interaction (Wink, 1995). The second hour of the post conference was spent discussing the commonalties and patient responses of assignments within the group. During this hour, students shared their concept maps with the group and learned from each other. In addition, relevant articles pertaining to weekly theoretical content were discussed. This process tied theory to clinical experiences and made the theoretical content meaningful and applicable.

Results

At the end of the 17-week clinical rotation, students were asked to complete the questionnaire shown in Figure 6 in the appendix. Questions 1 through 6 were open-ended questions and students' written comments were summarized using frequencies and percentages. Question 7 required students to give themselves a rating ranging from 0 to 100 in how learning to use concept maps changed their ability to think critically, solve problems, understand relationships between nursing diagnoses, and provide holistic care to patients. The data collected from the responses to each question is summarized below.

Question 1: What is your perception of using concept map as a teaching strategy?

- 75% (N=14) reported that concept maps were a good teaching strategy.
- 75% (N=14) reported that concept maps helped them provide holistic care.
- 63% (N=12) reported that concept maps helped them to think critically and enhanced their learning.
- 44% (N= 4) reported that concept maps were realistic, easy, concise, and applicable to clinical settings.

A majority of the students wrote that concept mapping was a new and great strategy, and an interesting way to learn nursing care of patients. Developing concept maps helped stimulate critical thinking and problem solving, and thus enhanced learning concepts. They reported that concept mapping helped them provide holistic care, enabling them to plan care for all the patient's actual problems. Concept maps gave a clear picture of the patient, were less time consuming, were more realistic, concise and easily applicable in clinical settings and more useful in organizing nursing care. Concept maps were seen as comprehensive and gave a full picture of the patient status and interventions. Students also commented that they were better able to plan patient teaching for each problem based on seeing the total patient picture using concept maps.

Question 2: How would you compare concept maps and traditional nursing care plans?

Table 1 below summarizes comments made by students as they compared concept maps with traditional nursing care plans.

Table 2: Comparing Concept Map with traditional nursing care plans.

Concept Map	Traditional NCP
Simple, easy, modern	Lengthy too much writing
Specific, concise, organized	Not realistic in practical life
Saves time and energy	Time consuming
Decrease paper work	Lengthy
See patient as a whole, deals with several actual priority problems	Nursing diagnosis are separate
Covers all aspects of patient care	Focuses on one problem at a time
Helps learning and thinking effectively	Patient not seen as a whole
Discourages copying nursing care plans from books	Thinking limited to one problem at a time
Learn to integrate and understand relationships	Nursing care plans are copied from books

Question 3: Was your learning enhanced by using concept maps?

All 19 students responded that their learning was enhanced using concept maps. Comments under this question were similar to those in response to Question 1 with additional comments indicating that the integration of medications and diagnostic tests was enhanced using the concept map care planning process. The ability to integrate, analyze and prioritize was a resounding theme in the data collected from students.

Question 4: How would you evaluate the use of concept maps?

Students responses were again positive and redundant, with 63% of the students (N=12) commenting that it was an excellent strategy. Students reported that concept maps helped them think critically because using an approach different from the column format helped them to clearly see patient needs. Students reported that they became more organized in their thoughts and actions and that this helped them to provide care and learn holistically.

They also reported that concept map care plans were practical, realistic and less time consuming.

Question 5: Share some of the frustrations you experienced during the learning process.

Some students reported feeling frustrated while placing data in the correct boxes (31.5%. n=6); a few students found it difficult to make linkages (10.5%, n=2); a small number were afraid to work on the large number of nursing diagnoses simultaneously (15.7%, n=3). These same students also reported that while concept maps were difficult to understand and were time consuming at first, they seemed to become easier as the rotation progressed.

Question 6: Give some suggestions for how the frustrations can be handled in the future.

- 42%(N=8) believed that more classroom, clinical and pair work was needed.
- 5% (N=1) suggested teaching concept mapping in smaller groups.
- 26% (N=5) suggested that all clinical faculty should be well-versed with the use of concept mapping and that implementation of concept maps should be consistent across all groups.

Question 7: Self-rating on various factors.

Students were asked to rate their current ability to think critically, solve problems, and make linkages between the nursing diagnoses and their ability to provide holistic care on a scale from 0 to 100. They were also asked to indicate how they rated themselves at the beginning of the rotation, at entry into the nursing program, prior to learning about concept map care plans. Students reported significant gains in each area as follows:

	Beginning of Rotation	End of Rotation
Critical thinking	42.2	82.6
Problem solving	39.7	88.6
Making linkages	32.4	84.25
Provide holistic care	46.5	90

The average score for critical thinking, problem solving, making linkages and providing care was 40.2 at the beginning of the rotation and rose to 86.4 by the end of the rotation, a significant overall gain.

Faculty perceptions of concept mapping

Faculty reported that using concept map care plans as a teaching and learning strategy was stimulating and held the interest of post-RN students. "Concept map care planning allows the teacher to see the utilization of the nursing process holistically and to see the situation in its parts, the sum and the whole."

Students using concept maps seem to better understand and make relationships between data and to formulate nursing diagnoses. Students did not merely copy nursing care plans from books; instead, concept maps stimulated critical thinking far more than basic traditional column nursing care plans. Concept maps helped teachers develop specific questions to guide student development of knowledge of application of theories to clinical settings. On the whole, concept maps were seen as a "novel and creative teaching strategy" that promoted increased thinking in both students and teachers.

Initial frustrations experienced by faculty resulted from the fact that students possessed different levels of knowledge regarding nursing processes due to variations in their prior educational backgrounds. Students caught on to the use of concept maps with help from faculty and peer support.

To handle frustrations of students during the learning process, all clinical teachers should be involved in the introduction sessions on concept maps. All faculty members should get involved in teaching during small groups sessions as students learn the concept map care planning process. In this manner, everyone will start off with the same information. Faculty should plan on meeting every few weeks to discuss the progress of students in learning the concept map nursing care plan process and must jointly review the maps developed by students.

Faculty reported that the step of the concept map care planning that was most difficult for students to comprehend was Step 2, when data is being organized into categories. During this stage, it was beneficial for students to fill in data (subjective, objective, medications, and diagnostic tests) that they were most familiar with first.

A few students also had difficulties with Step 3 while making connections between data,

due to a lack of a knowledge base. Many students also had difficulty organizing interventions in Step 4 and relating patient responses to interventions in Step 5. Students were told to include patient teaching under each nursing diagnosis and then to develop a teaching plan according to the METHOD approach (medications, environment, treatment, health, outside, and diet), as described by Schuster (2000).

The final exam results of the 19 students were as follows: A (80 - 100), 7 students; B (70 - 79), 10 students; and, C (60 - 69), 2 students. In comparison, the result of the previous year was: A, 6 students; B, 13 students; and, C, 11 students. The results in the current year suggest that the teaching strategies, clinical focus and concept mapping improved the students' critical thinking abilities and the outcome of using concept map care plans as a teaching strategy was positive. The biggest improvement in the results was in the number of C grades and there were also a greater number of students who scored B's and A's this year.

Conclusions

Using concept map care plans as a replacement for the column nursing care plan in classroom and clinical settings was an interesting and stimulating strategy with post - RN students. Both faculty and students found concept map care plans to be an effective strategy in organizing care, providing holistic care and developing critical thinking skills. Concept map care plans provided instructors with the ability to give immediate feedback to students in clinical settings and thus enhanced learning. Final examination results were also much better as compared to the previous year. It is recommended that this strategy be taught to generic faculty and that a further study be conducted to compare post-RN and generic nursing students. Nursing care plans are developed globally, and concept map care plans are an effective method of teaching care planning to students.

Acknowledgement

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Appendix

Figure 1: Nursing and medical diagnoses

Source with permission: Schuster (2000b).

Figure 2: data to support diagnoses

2.Pain
Abdominal-abscess-surgical
wound
Mouth-ulcers
Ca Bone/Lung with chronic pain
Demoral
Morphine

1.Altered Nutrition/Fluid and
Electrolte Imbalance

NPO   **Mystatin**
Mouth ulcers   **FBS 147(history of diabetes)**
NG TUBE   **Dry skin**
TPN   **Anemic**
IV   **Weakness**
139 lbs,5'10'

8.Anxiety
Surgery
Says he knows he's going to die
Clenches his fists when he
can't do something
Chronic pain
Fidgets with his hands
Cries
Verbalized that he is nervous

3.Infection/skin integrity
T=100.5
Abscess-wound
2 drains, purulent drainage
fecal material in drain
WBC 12.9

Chief Medical Diagnosis:
Abdominal Abscess/Bowel Obstruction/post-op
Priority Assessments:Pain, Distention, Bowel Sounds,
I and O, Drainage, Abd Wound

7.Decreased Cardiac Output
Atrial Fibrillation   **K=33**
Vital q4h   **Lanoxin**
Rate=128   **Pt=17.5**
(irregular)   **Ptt=40.2**
BP113/60   **Fatigue**

4.Elimination
 Foley
 Check urine output>60cc per hour
 Enlarge prostate
 Proscar
 Creatinine .7
 BUN 22

5.Decreased Gas Exchange/Oxygenation
 Ca of Lung(history)
 Radiation/Chemotherapy (history)
 Respiratory Treatments
 Decreased Breath sound rt.lung
 Incentive spirometer
 Respirations labored check q4th
 RT q4 h, Ventalin
 RR=22
 Oxygen 5L
 Hgb=10
 Fatigued

6.Immobility
 Ca of Bone (history)
 Chemotherapy (history)
 Fall protocol
 Lethargic/Fatiqued
 Tubes(tripping)
 Plexipulse

Step 2

Source with permission: Schuster (2000b).

Figure 3:Relationships between diagnoses

Source with permission: Schuster (2000b).

Figure 4: Nursing interventions and evaluation

Step4. Nursing Interventions	Step 5.Evaluation
1. Altered Nutrition, Fluid, Electrolytes	
Assess new lab values	No new lab values except as shown below
Assess I & 0	NPO except ice and meds/output 650
Mouth care with nystatin outh wash	Liked the taste, said it helped a lot
Ice chips	Sucked on for sore throat
Monitor NG, check drainage	Nurse checked (skill not yet learned)
Monitor TPN	Nurse checked (skill not yet learned)
Assess abdominal pain	109
Bowel sounds	Grimacing, moaning, "3" gave MS at 8:40
Distention	Hypoactive
Skin Turgor	None, soft(has NG)
Drainage, JP	Poor, dry;lubricated with bath
Abdominal incision	Purulent green discharge-B
	Infact, no redness, ederna
2.Pain	
Assess pain with scale and medicate with demoral and morphine	
Positioning	As below
Check noise, lighting	Positioned in bed with pillows
Guided imagery	Decreased light and fell asleep
Back rub	Used when patient got a thoracentesis
	It hurt to be touched so did not do
3. Infection	
Monitor temperature	
Assess WBC	96.2, 97.9
Bed bath	No new values
Clean foley	In pain during bath, pain with movement
Oral care	See elimination below
Assess and document drainages, wounds	See nutrition above
	See nutrition above
4.Elimination	
	No need to call
Call doctor if urine output<60cc/hr	Patent, draining
Check foley patency	Clear yellow urine, no smell
Check color, amount,smell	Done
Clean foley	Small BM
Bedpan for BMs	As above
I & O	No new values
Monitor BUN, creatinine	
	Rales throughout especially rt.base
5.Decreased Gas Exchnage	8:00 a.m. 156/80 96.2 112,24
Monitor breath sounds	
Check vitals, especially respirations	12:00p.m. 126/58 97.4, 88, 20
Use IS and do CDB	
Oxygen intact	No IS, RT did CDB after treatments and one done
Check to be sure RT comes	onec at 10.00 a.m. while awake and tolerated well
Fatigue	On @ 5L
Hgb	Come at 8:30 and 12:30
	See immobility
6. Immobility	No new lab
Monitor fatigue	
Safe Environment-Fall protocol	Weak and tired
Four side rails, bed low, call bell	Everything in reach
Make sure plexipulses on	Done
Do ROM	On for 2 hours
Medicate for pain	Did leg exercises as above
Vitals	As above
Get up in chair at bedside	For 1 hour
7.Decreased Cardiac Output	126/58 97.9 88, 20
Check vitals q4h, especially pulse and BP	Medicine down NG tube
Apical check with lanoxin	4.5 PT & PTT not redrawn
Check K,PT,PTT	Arrythmias present, irregular with AF
Listen for arrythmias	
	Helped patient relax during bath
8.Anxiety	Verbalized concerns
Guided imagery	Caused more pin
Therapeutic Communication, especially distraction and active listening	Cooperated
Back Rub	Seemed more relaxed
Use Anticipatory Guidance	Seemed to help, coached him
Use comfort touch	
Teach slow breathing	

Step 4 & 5

Source with permission: Schuster (2000b).

Figure 5: Sample Concept Map Diagram

2.Plain

Stones in ureter
Pain lumber region
Tense expression
Urine Oxylates ++
Urine WBC 15-20
Mefenamic acid-
(Ponstel) q6h

2.Deficient Fluid Volume

Nausea & vomiting
Thirst
Dry lips
Poor skin turgor
Intake & output
K-2.7
Physicians planning
intravenous fluids &
K replacement

2.Deficient knowledge

Ask:"What is
the reason for
these stones
forming?"
Teach:
Diet restrictions:
low calcium 7
low oxylate
Fluids:Increase to
3000 cc/day
S/S of UTI

Chief Diagnosis: Renal Calculi
Priority Assessments: Pain,
dehydration, I & O, s/s of UTI,
bladder distension

3.Impaired Urinary Elimaination:

Discomfort
Hematuria
WBC 15-20
RBC 2-6
Oxylate crystals
Strain all urine
Urine pH 1.010

4.Disturbed Sleep pattern

Pain
Yawning
Fatigue
Irritable
Lack of interest

Figure 6: Student Questionnaire

Q1:   What is your perception of using concept maps as a teaching strategy?

Q2:   How would you compare concept maps and traditional nursing care plans?

Q3:   Did using concept maps enhance your learning?

Q4:   How would you evaluate the use of concept map?

Q5:   Share some of the frustrations you experienced during the learning process?

Q6:   Give some suggestions how the frustrations can be handled in the future.

Q7:   Circle how you rate concept maps have developed your current ability to think critically, problem solve, make linkages between the nursing diagnosis and provide holistic care. Also, circle how you rated yourself at the beginning of the rotation when you entered the nursing program, prior to learning about concept map care plans.

a. Scale: Critical thinking.

0%…10%…20%…30%…40%…50%…60%…70%…80%…90%…100%

b. Scale: Problem-Solving

0%…10%…20%…30%…40%…50%…60%…70%…80%…90%…100%

c. Scale: Making relationships /connections between nursing diagnoses

0%…10%…20%…30%…40%…50%…60%…70%…80%…90%…100%

d. Scale: Providing holistic care to the patient

0%…10%…20%…30%…40%…50%…60%…70%…80%…90%…100%

RESEARCHING PRACTICE, PRACTICING RESEARCH: IMPACT ON TEACHING AND LEARNING

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Abstract

An action research study aimed at finding out the potential of the instructional strategies (whole class discussion, cooperative learning and inquiry) taught at AKU-IED on student learning is being carried out in three phases in five developing countries served by AKU-IED.

The seminar presentation will focus on learnings from the first phase of the research. It will focus specifically on identifying the possibilities and challenges PDTs face in preparing teachers to involve the whole class in discussions and in the teachers using it in their classrooms. It will also focus on the nature of discussions in the classrooms in different contexts and the resultant impact on students' learning.

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Introduction

To improve the quality of education in developing countries, AKU-IED developed a model of school improvement through in-service teacher education. In the Masters program, teachers are educated to become exemplary teachers, teacher educators and researchers. Ten years down the road, a key question is: what is the impact of the teacher education program on teachers and students. One way of finding out is through classroom-based action research studies, in which teachers use a particular teaching strategy taught to them by a Professional Development Teacher (PDT, a graduate of AKU-IED) and note the benefits that accrue to students (Anderson, 2001). Such studies would indicate

the potential of the strategies taught at AKU-IED for achieving its goals.

As the MEd class of 2002 was completing their studies I suggested to a group of students representing different geographical contexts the possibility of engaging in classroom-based action research. The aim was to investigate the benefits that accrue to their students' learnings, that accrue to teachers and PDTs, and the possibilities and challenges faced in educating teachers in the use of discussion and action research to continue improving their use of the strategy.

Review of the literature

Educators often view learning from two perspectives, either as a product or as a process. In product-oriented classrooms emphasis is on "what" is learned. The learning usually comprises factual information and description of events. In process-oriented classrooms the emphasis is on "how" information is acquired, that is, the focus is on the processes of learning. Research in most developing countries indicates that teaching is product-oriented (Warwick and Reimers, 1995). Teaching is most often the transmission of textbook knowledge from teacher to the students through lectures and teacher directed question and answer sessions. Students are expected to rote memorize the information and regurgitate it in exams. Successful regurgitation of information presented is accepted as evidence of learning. Teaching and learning of this kind while producing "the best parrots" (Hoodbhoy, 1998) fails to prepare students with the knowledge, skills and attitudes required for personal success and the development of society. In process-oriented classrooms the teachers guide student learning. Students actively participate in investigating problems and discovering information in relation to their questions. The focus on product needed to be balanced with process.

Recognizing the above one of the objectives of AKU-IED's in-service teacher education programs has been to facilitate the development of teachers' pedagogical content knowledge through enhancing teachers' content knowledge and instructional repertoire with process-focused strategies, such as, cooperative learning, inquiry, discussion, to enable them to improve the quality of teaching and facilitate students' acquisition and application of knowledge, skills and attitudes in different situations. In addition, AKU-IED has encouraged the development of the skills of action research so as to enable teachers to continue improving their practice.

Action research (AR)

According to Kemmis and McTaggart (1988), "Action research is a form of collective self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and the situations in which these practices are carried out". Elliot (1991) defines action research as, "the study of a social situation with a view to improving the quality of action within it". Somekh (1995) cited by Descombe (1998) states that "Action research rejects the concept of a two-stage process in which research is carried out first by researchers and then in a separate second stage the knowledge generated from the research is applied by practitioners. Instead, the two processes of research and action are integrated" (p. 58). From the above it is evident that action research can be described as a process, which pursues action (or change) and research (or understanding) at the same time (Dick, 1993). In most forms action research does this by using a cyclic or spiral process that alternates between action and reflection, which allows one to be responsive to the situation as well as rigorous, thus meeting both action and research requirements. Alternating between action and reflection allows one to continually refine methods, data and interpretation in the light of understanding developed in earlier cycles. In most of its forms it is participative and qualitative (Dick, 1993).

Discussion (DS)

Discussion is a form of group interaction, in which people seek to address a question or issue of common concern to them, with the intention of understanding, appreciating or contributing towards its resolution (Dillon, 1994). Aggarwal (2001) describes discussion "as a thoughtful consideration of the relationship involved in a topic or problem under study. It is concerned with the analysis, comparison, evaluation and conclusion of these relationships" (p. 107). A review of empirical research on discussion (Gall & Gall, 1976; 1990) found that five types of learning outcomes accrue from the use of discussion. These are mastery of the subject matter discussed, problem solving ability, moral development, attitude change, and communication skills. Dillon (1994) notes that discussion as a strategy is usually avoided because discussion does not come naturally but has to be learned, there is a lack of experience of teachers in conducting discussions and there are hindering systemic conditions in school and society. Farooq (1993), describing the difficulties from a developing country perspective, notes that discussion is not usually used in daily practice because teachers believe it can only be applied in

small groups, used for particular topics and is time consuming. He too notes that trained teachers are required to conduct it successfully.

Research design and methodology

The research design used is that of action research. And action research was chosen for a number of reasons. First, there is evidence that many practitioners (doctors, teachers, psychologists) do very little research (Barlow, Hayes and Nelson, 1984; Martin, 1989 cited in Dick, 1993). There is also evidence that practitioners learn more if they subject their practice to deliberate and conscious reflection (Schon 1983, 1987). Second, action research is usually participatory. There is evidence that more and better learning accrues from working with others; that a partnership in which one works together with colleagues is more ethically satisfying and may be more occupationally relevant (Dick, 1993). Third, the PDTs who will be leading this research were introduced to the methodology of action research and some have used this methodology for their dissertations. In addition to this, they have first hand knowledge of the possibilities and challenges of undertaking action research. They have also been exposed to and practiced the strategy of discussion during their MEd Course.

The action research in this study is being conducted at three levels all of which proceed simultaneously. The focus of and outcomes expected at each level are presented below. For the purpose of this paper the action and outcomes at level 2 and 3 are described.

LEVEL	WHO	ACTIONS	OUTCOMES
1	Faculty	Develop understanding of action research and the instructional strategies. Facilitate research through support and challenge. Document the process.	Challenges and possibilities of action research for the teacher educator. Nature of impact at all levels.
2	PDT	Teach action research and Peer-coach teacher; facilitate critico-creative reflection. Document the process.	Possibilities of using action research for teacher education in their context. Changes in self, others and context. Nature of discussion.
3	Teachers	Learn action research and use action research to facilitate use of discussion. Document the process.	Possibilities and challenges in using action research and strategies in their classroom. Benefits that accrue to students in terms of knowledge, skills and dispositions.

Research question

The main research question was: What benefits accrue to students from teachers using discussion as an instructional strategy taught to them by the PDTs?

There were a number of subsidiary questions, the questions this paper will focus on are:

1. What possibilities and challenges do the contextual conditions pose to the learning and implementation of these strategies?
2. What learnings accrued to PDTs, teachers and students from the use of action research to facilitate the discussion in their classrooms?

We decided to co-write the research proposal and to develop a common understanding of Action Research and the Instructional Strategy to be taught. For a week, each day we spent 2-3 hours developing the common understanding through presentations, discussion of ideas and concerns and identifying relevant literature that PDTs could take with them. Two members of the group facilitated each session.

Each PDT, on return to their context met with their heads, discussed the research proposal and got their consent. PDTs invited teachers to participate in the research. They engaged in a reconnaissance of themselves, the teachers and the context. Each then developed teachers' understanding of action research and the instructional strategy to enable teachers to use action research to improve use of the strategy in their classroom. The first instructional strategy, PDTs decided to use, was discussion. The rationale being that teachers already use some form of discussion and therefore they would be starting from where teachers are at. The PDTs supported and challenged the teachers through the stages of planning, teaching and reflection as they used the instructional strategy in their classrooms.

Research sites and participants

The research was conducted in six sites in five countries -- Kyrgyzstan, Pakistan (Karachi and the Northern areas), Tajikistan, Tanzania and Uganda. A brief description of each site follows: Rahat Joldoshalieva worked in the Department of World Languages at Osh State University, Kyrgyzstan with four pre-service English language teachers. Antipas Chale worked in the Aga Khan Primary School in Dar-e-Salaam, Tanzania with two mathematics teachers. Unlike other sites this school was a resource rich school and Chale had an administrative position, which provided greater potential for change. Farah Huma

worked in Habib Girls School, Karachi, Pakistan with an English and mathematics teacher in the secondary section of the school. Besides engaging in teacher education she was involved in classroom teaching herself. Haji Karim worked in a school in the rural areas of Northern Pakistan, which is part of a Whole School Improvement Programme (WSIP). Teachers had some understanding of action research and were very enthusiastic about the opportunity to participate in the study. Nakhat Abdulofizov worked in the Aga Khan Lycee, which is the only private English medium school in Khorog, Tajikistan. Unlike the others his sole responsibility was facilitating teacher education at the school. This involved administrative responsibilities and continuing professional development opportunities for himself as well. Mukobe Margaret teaches at the Aga Khan School in Kampala, Uganda. She started the study with the instructional strategy of inquiry. Her work around action research has been included in this paper.

Action research process - reconnaissance

To understand the research context, the research participants and the nature of teaching and learning PDTs engaged in reconnaissance. They gathered data through the use of semi-structured interviews and classroom observations. Besides the interviews and lesson observations, informal talks also provided data for the study. The findings from the reconnaissance regarding the contexts, the PDTs, the teachers and the students are given below.

The school context

In most schools, there was an awareness that quality of teaching was generally poor, therefore, they offered in-service teacher education. In-service teacher education usually consists of workshops conducted on Saturdays. These workshops were conducted primarily by foreign experts but, to difficult degrees, are now being led by PDTs. Processes like action research or coaching which are ongoing are not well understood nor supported. The exception was the Northern Areas (NA) of Pakistan where the school is part of the WSIP. When PDTs were given permission to conduct the action research, the permission did not entail providing the conditions necessary for the conduct of the research, that is, provision equipment (cassette recorders, transcribers) or time for training (planning, observation and critico-creative reflection) for both PDTs and teachers. Lack of reading material for professional development in general and on action research and subject-specific literature on discussion was greatly felt.

The teachers

With the exception of the NAs and Tajikistan, where teachers had had the opportunity to be involved in school improvement programs, the teachers did not know about action research. In Kyrgyzstan research was perceived to be theoretical and experimental "done in laboratories or in libraries". Teachers questioned, "How can you do it yourself in the classroom?" Some teachers were aware of and engaged in reflective practice but their reflections were descriptive. For most teachers discussion was teacher-questions and student-answers.

The teaching-learning context

Observations showed students sitting in rows facing the teacher and the board. In all school contexts lectures was the dominant teaching methodology. When they were more actively engaged it was usually in answering teachers' questions in single words or phrases. Moreover, responding to questions seemed to be responsibility of the same few students all the time. Students passively absorbed knowledge provided by the teacher. In mathematics classrooms Chale and Haji Karim observed that teachers mostly solved mathematical problems on the board and the students recorded them accordingly. In the context of the NAs the secondary school students felt shy to discuss in the class and thus they resisted talking.

PDTs

As PDTs initiating the study we also reflected on ourselves. We wondered, "Is my knowledge and practice of action research and discussion sufficient to work with teachers?", "Will I be able to support the teachers accordingly?" Furthermore, Haji Karim was sent to a new school. He wondered, "Do I know the context well enough to start making changes?" Most of us on returning to our contexts were told our responsibility was teacher professional development, however, we were soon seen as "a man/woman for all seasons".

Reconnaissance-based action plan

These findings indicated the need to develop teachers' understanding about discussion and action research. The PDTs planned to begin by teaching action research and discussion, then support teachers practice in their classrooms and to gradually encourage teachers to work independently.

Cycle 1: Developing teachers' understanding about AR and DS

As planned, PDTs started developing teachers' understanding of AR while Rahat focused on discussion. All of us, except Rahat, shared reading material on AR with the teachers. However, this idea was challenged when teachers either did not read the article because of their workload or found the reading was too difficult to understand.

In most cases the main focus of the training was on the approach of AR, that is, the cyclic moments of AR and data-gathering techniques. In the case of Rahat it started with a concern emerging from practice. Discussion was used in the class and the teacher was helped to identify a concern from practice through reflection. Group discussion helped to identify ways to address it. This deliberation informed future classroom practice.

Four PDTs, Farah, Karim, Chale and Nakhat, after giving a "small dose" of action research, started to develop teachers' understanding about discussion. They started with group reading of the articles about discussion. The content of the articles focused on the discussion process, organizational arrangement, teachers' role, benefits of the discussion and so on. Teachers and PDTs raised questions and discussed. Rationale, for these sessions, was to introduce teachers to the theory of discussion through using the strategy of discussion and build a common conceptual understanding of discussion.

Cycle 2: PDT-supported practice

Putting theories, into practice was carried out differently across the contexts. For instance, in the case of Nakhat and Karim the planning stages were done collaboratively between the PDTs and the teachers. In both the cases, they co-planned with the teachers. The reasons for co-planning were to meet the teachers' requests and to increase their confidence. The teachers then taught the lesson. Dissatisfaction with the lesson resulted in the request for, Nakhat, to co-teach one of the teachers, and Karim, to demonstrate using a discussion lesson in the teachers own classrooms. After some practice, Farah also had to do a demonstration lesson as the teachers saw the necessity of it.

In the case of Rahat, Farah and Chale, teachers planned themselves. They discussed the plans with the teachers before they taught the lesson in their classrooms. During the teaching process, PDTs observed the lessons. In the case of Rahat and Nakhat they were accompanied by at least one teacher at the early stages of the teaching practices. On completing a lesson, rather than engaging in self-reflection, teachers expected feedback as was given by their supervisors, which were mainly condemnatory and focused on the

teachers' mistakes.

In all the cases, after a number of practice sessions, discussions between the PDTs and teachers were conducted to discuss and address issues that had arisen during practice. Apart from immediate self-reflection and discussions, the writing of reflective journals was another source of information to track teachers' activities in and outside the classrooms. PDTs encouraged teachers to reflect on data from the observations to identify areas of growth and requiring growth. With the exception of the teachers Rahat worked with, all the teachers had engaged in writing reflections. Their reflections, however were very descriptive, non analytical and referred only to self-positive feedback. Teachers were guided through the process of reflecting by asking questions and discussing their reflections as they were sharing them with PDTs.

Cycle 3: Independent practice of teachers

Later on, in almost all the cases, teachers were encouraged to move to working independently. For instance, Rahat moved her teachers to independent practice with another teacher taking Rahat's place as critical friend.

Discussion on findings

Below we discuss the learnings that accrued from the study for the PDTs, teachers and students, from practicing action research to improve practice of discussion in classrooms in developing countries.

PDTs' learning

Doing action research results in self-improvement and understanding of one's own practice. In this action research process, PDTs gained different learning experiences related to teacher education, action research, and discussion. In addition, PDTs acquired some skills of educating teachers and improving their own understanding and actions. Below we discuss PDTs' learning.

Data-based reflection changes practice but is a gradual process

All PDTs realized that teachers took considerable time to change their practice of discussion in their classrooms. We share one Kyrgyz teacher's case, to represent the process of change in teachers' beliefs and practices through databased reflection. Initially,

the discussion ended up either in reverting to previous practice: teacher questions and students' answers, or in a debate between two groups. She reflected, "Today's discussion became a 'battle' between two groups. One group preferred marriage by love, while others chose marriage by convenience". The teacher realized that debate resulted from her favoring one group 'marriage by convenience' than paying equal attention to all ideas emerging. The teacher had also seen her role as a guide and recognized that her talking too much during the discussions left few opportunities for students to participate and so did not allow other ideas and opinions about the issues to be discussed. After efforts to change, she reflected, "In this discussion class, I tried to speak less than my students, though it was difficult for me not to participate". After some time, this teacher emphasized, "Today in discussion, I sat among the students and only answered when I was questioned. Previously I found it difficult to let students lead the discussion, now I have learned to sit among them and observe their discussion". From a case like this reflected in almost all contexts, PDTs learnt that this process of teachers' own identification of issues and changing them takes time.

In addition to this, PDTs learnt that a common understanding of discussion strategy does not mean common practice. From observations and discussions PDTs learnt that discussion looked different in different classroom. A PDT, seeing a teacher begin a discussion class with reading, wondered what was happening and wanted to intervene. She soon realized the teacher had used the prescribed reading to facilitate discussion on the issues addressed therein. PDTs saw the uniqueness of discussion in every teacher's use of discussion brought about by differences in subject matter, teachers, schools and wider contexts. So, 'discussion' became 'discussions'. In this case, action research facilitated creative use of the strategy by implementing teachers.

Action research requires development of skills

PDTs learnt that doing action research for teachers requires several skills and a great deal of practice on them. PDTs, after developing teachers understanding of the process of action research, expected teachers to be able to do action research. However, they found that doing action research requires the development of several skills, such as identifying an area of concern or problem, formulating a question, nonjudgmental observation using data collection tools, reflecting on actions, analyzing data and so on. PDTs are now convinced that each skill has to be taught and practiced by teachers several times. Therefore, PDTs need to support teachers through a number of cycles before they

can expect teacher to work independently. PDTs were impatient with the slow process of teachers' developing skills to do action research given the timetable set for the study.

"Seeing" facilitates "doing"

PDTs learnt that teachers need to 'see' in order to 'do'. Some teachers found it difficult to change their practice of discussion simply on reading and discussing how to do discussion differently. Teachers initially asked, "How will we use it in class?" PDTs were reluctant to demonstrate, as they did not want teachers to copy them but two felt a demonstration of discussion in the teacher's class would enable them to see what discussion looked like in their own classes (Pakistan). Another PDT facilitated teachers to micro-teach using discussion with other colleagues giving creative feedback (Kyrgyzstan). Both strategies seemed to enable teachers to build their confidence in the use of discussion strategy.

Teachers are motivated to learn when they see students' positive learning outcomes

Students' positive learning outcomes served as one of the motivational factors for teachers continuing to use this strategy. In mathematics classrooms teachers and PDTs observed that students started to ask each other questions as well as asking their teachers (Pakistan and Tanzania). In addition, students were able to answer questions like 'How' and 'Why' to demonstrate their understanding of concepts taught. So, teachers needed to see outcomes of their work in their students' learning to further improve their practice of discussion.

Transplanting new ideas into different contexts is challenging

PDTs faced challenges in 'transplanting' the new ideas of action research and discussion strategy into their respective contexts. PDTs faced challenges to introduce action research to teachers in schools and universities in all the contexts except the Northern Areas. Although, teachers in the Northern Areas were familiar with the concept of action research they were not skilled in doing action research themselves. In Kyrgyzstan, action research appeared to be a completely new idea, as the PDT could not find either an equivalent term for action research in Russian and Kyrgyz languages or related literature to read and use in the specific context. University faculty did not seem to accept action research as a research methodology. They initially equated it to 'experimental study' only differentiating it as a 'small' research methodology when they engaged in the process of action research. Furthermore, teachers in schools did not seem to believe that they could carry out research on their own. However, when teachers went through the process

with the support of the PDTs, they recognized it as research and themselves as scientists.

Similar to the experience of action research, PDTs learnt that it was difficult to change teachers' ingrained practice of discussion. Initially teachers tended to revert to old practice despite reading discussions and practice. And teachers tended to blame students rather than see students' behavior as a result of their practices. It took a long time for teacher and students to adopt new roles required in discussion.

Teachers' learning

Teachers, doing action research to study the use of discussion strategy, learnt new research skills, came to better understanding of their own practices and developed some positive attitudes. Learning about and practicing the discussion strategy brought changes to different degrees, in teachers' beliefs and practices.

Enlarge their instructional repertoire

Teachers learned discussion, which contributed to enlarging their teaching repertoire. Teachers reflecting on their previous practices stated, "Before I was using boring method. Like other teachers I also spent time listening to one student only. Now I think it is shameful to do so. Discussion strategy helped me to change my teaching practice". Some teachers stated that the discussion strategy they learnt now was different from what they had thought it to be: teacher questions and students' answers. A teacher commented, "I enlarged my methodology of teaching English. Using discussion I learnt how to involve students in it, how to help students to write a summary of the discussion and how to formulate discussion questions". Moreover, the change in the instructional strategy resulted in other changes.

"Shift" in roles

The teachers' claims of their shift in their role from 'controller' to 'guide' were substantiated by PDTs' observation of discussion in their classrooms. Teachers perceived their role as to lead and control students' so that their classroom interaction patterns were one sided. Teachers thought this was necessary because as a teacher exclaimed, "I want to tell students some things which they do not know…. I want to summarize discussion myself as they cannot do it". Teachers acknowledged, "It is difficult to change oneself as teachers used to be at the center of discussion and making conclusions". At the initial stage, some teachers even showed resentment to share their power with the students in

discussion. Although, giving up authority was painful for teachers later they were more willing to share their roles with students. With the shift in roles, teachers' initial beliefs, that "Teachers should be respected", or "There should be a boundary between teachers and students" were also challenged. Due to constant practice of discussion strategy and reflecting on it, teachers came to see themselves as an equal member of discussion.

Skills and dispositions developed

In the process of doing action research on the use of discussion strategy, teachers developed some skills and dispositions. Teachers learnt to formulate open-ended questions, which were 'discussionable' in order to open up discussion to different opinions, ideas, experiences and information. Teachers acknowledged that probing questions enabled students to think deeper, to think about their thinking and answer further. A mathematics teacher stated, "If students are stuck, the teacher has to click on them, questions help them to think deeper rather then give an answer at once". And questions like "What do you think…?" "How would you act?" served for the purpose.

Planning and reflecting for lesson were other skills which teachers claimed to develop. These skills seemed to be developed gradually by practicing them. PDTs also noted that teachers shifted to plan 'in minds' or 'with some notes' to writing detailed and comprehensive lesson planning later. Teachers acknowledged that they learned to think on lesson planning before implementing it. The strategy of discussion facilitated the development of new dispositions. Initially, teachers were impatient and did not wait for students' answers filling in the silent moments. They jumped in to check students' mistakes in pronunciation and grammar (English) and when students did not give the right answer (Math). However, from using discussion, teachers learned to be patient and humble. PDTs observed teachers who provided wait time, which was acknowledged as an opportunity for the students to think and collect thoughts. In English classes initial lessons using discussion rather than accuracy, which was a common practice, focused on fluency. Teachers recognize that identifying and improving mistakes was not only teacher's task but had to be shared by the students. They collaboratively worked on improving mistakes using audio and video recorded discussions.

Learning from practice

Teachers acknowledged that they learnt from their own practices. One teacher stated, "Apart from theories and books, I can learn from reflecting on my own practices". While practicing the discussion strategy teachers learnt to formulate open-ended questions,

choose topics, which are related to students' experiences and life and facilitated learning of social skills and students' participation by developing a set of "Golden Rules". Teachers also learnt to use students' peer evaluation of participation, which helped them to compare with their assessment on participation.

Teachers learnt to identify and act on specific problems they faced in using action research. For instance, one teacher specified her research question as "How can I enable all the students to participate in discussion?" And in her later reflection she shared "I never thought of identifying problems in using a strategy and working on them. Now I have begun to notice my mistakes and try to act on improving the situation". Focusing on specific problems teachers learnt to focus at alternative actions, make decisions, plan for recording observations, and reflecting on actions. However, by its nature action research requires commitment to work documenting action, reflecting on them and making commitments to take actions to improve the situation. To do this, teachers were required to read and study to develop questions, identify problems and take actions. Often teachers felt overburden trying to combine a demanding workload with systematic and rigorous research (Dick 1993).

Students as a resource

Teachers who initially saw themselves as 'the' source of knowledge started to not only see students as a source but also as resource for their learning. Students brought different news into discussion based on their diverse experiences. A teacher said, "Discussion helped not only students but even myself. I got some information from my students" (Tanzania). However, teachers also acknowledged that as teachers, they should know more about the topic under discussion, but accepted and recognized that students could provide information from which they could learn. University teachers realized this more acutely given their students' diverse background and experiences. A teacher reflected, "I realize I could have read more but I can not be expert in all areas. I was learning from listening to my students. It is a shame I did not recognize this before" (Kyrgyzstan).

Students' Learning

Identifying students' learning outcomes was difficult given the issue of defining the nature of learning. Chale expressed this concern, "When I compared students' test scores before and after the research process, I found no difference". This led to other PDTs challenging Chale's conception of 'learning'. Margaret suggested, "Chale, you have looked at learning as content knowledge, as that's what tests measure. I think we need

to look at learning more broadly, including understanding of concepts, skills developed and attitude changed". Chale pointed about what stakeholders wanted to see change in test scores as they equated them with learning. Haji Karim emphasized that there was a need to educate stakeholders to view learning broadly. He further stated, "Having content knowledge is not enough. Research shows that understanding content is important but skills are transferable to other areas and useful for life. Positive attitudes and dispositions facilitate the learning and understanding of content. Even teachers acknowledged that in the long run many positive learning outcomes would emerge from teaching using discussion" (Pakistan).

After this debate we were able to look at students' learning outcomes in terms of understanding of concepts, skills developed and attitude changed due to the use of discussion strategy.

Understanding of concepts

Students demonstrated their understanding of concepts discussed. Initially, in mathematics classrooms PDTs and teachers observed that common practice used was following algorithms and practicing rather than asking students to demonstrate their understanding. If previously math teachers' focus was on the product that is, the right answer now it was replaced by focusing on students' understanding process and explaining their answers. Teachers probed students, "Why do you think so?" "How did you come to this?" and other similar questions. A math teacher shared, "Through discussion, my students have learnt to solve math problems in different ways" (NA). In English classrooms, students appropriately used new vocabulary related to the topic under discussion, demonstrated understanding of the vocabulary.

Skills developed

Students developed social, academic and communication skills while engaged in discussion. Students together with their teachers created "Golden Rules" for discussion, which required students to demonstrate social skills such as taking turns, listening to each other, respecting each other's ideas and acknowledging differences of ideas. Students also learnt to support their ideas and opinion with concrete evidences not only from their own experiences but also from literature, newspaper articles and so on. In addition, students learnt to write discussion summaries. Students demonstrated their communication skills by asking questions, seeking clarification and extending of ideas.

Attitudes changed

Apart from demonstration of understanding and skills, teachers and students perceived the development of some positive attitude from the use of discussion. Initially PDTs and teachers observed students unwillingness to share their ideas negating each other's ideas and refused to recognize differences of views. Gradually, they realized they could learn with and from each other and became more willing to share their ideas, accepted different ideas and views and provided evidence to support their own view. They even became more responsible and independent learners by finding materials to use as evidences to support or reject the views and ideas presented. PDTs and teachers observed 'gain' in some students' self-confidence and self esteem overcoming their shyness and fear of being questioned and answering 'wrongly'.

Concluding remarks

Given the differences in school systems regarding understanding of teacher professional development, teacher and PDT workloads and support of the administrations led to the emergence of contextually relevant models of teacher education. For instance, in Chale's case, he worked with the teachers on planning and reflection. However he rarely observed their lessons. Hence, his role became less apparent and less dominating, thus, enabling the teacher to do research independently. Chale did this, as he wanted to work as much within the existing system as he could. Rahat worked with four teachers, this enabled her to divide teachers into pairs for planning and observation but bring them together for group discussions on similar issues.

PDTs recognized that their facilitation (support and challenge) 'whet the appetite' of teachers to learn not only the new strategy and research skills, but also using the strategies they realized that they could learn by reflecting. In using to learn by reflecting strategies, teachers realized that they could. PDTs questioned, "To what extent and for how long should PDTs support teachers in conducting action research? What will ensure the teachers' continue using discussion, and more importantly, action research to improve practice?"

While writing this paper the messiness of the action research process disappear and it appears seamless. However, during the process PDTs had to address several questions and issues related to the process, for instance the "backing and forthing" rather than consistently moving forward. Moreover, differences in contexts, school systems, culture, subject areas, and even classrooms were apparent but appear erased here. In the quest

for systematic documentation, PDTs wanted to document each and everything that raised the question, "How do we document the lived experiences of PDTs, teachers and students during the action research process?"

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TEACHERS' PERSPECTIVES ON EDUCATIONAL CHANGES IN MBAP OF TAJIKISTAN: IMPLICATIONS FOR PROFESSIONAL DEVELOPMENT

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Abstract

There is an increasing demand for the evaluation and study of various programmes and educational initiatives that are taking place in Tajikistan - one of the most impoverished and least developed countries of Central Asia. This demand stems not so much from an increase in the number of programmes by different local and international organizations and their intersecting objectives, but by the continuous decline in the quality of education in the country, regardless of the effort these organizations put into action.

As a research fellow at the Central Asian Studies Unit of the Institute of Ismaili Studies, London, I was commissioned to conduct a study on the implementation and impact of Ta'lim curriculum - religious education programme for the Ismaili students of Tajikistan. The objectives of the study were to identify the factors that contribute or hinder the implementation of the curriculum and get an insight into the processes that characterize its implementation.

Through a series of case studies conducted in various parts of Mountainous Badakhshan Autonomous Province (MBAP) of Tajikistan, in April and May of 2003, the research explored how teachers interpreted their classroom practice and understood the objectives and the content of the subject. The data was collected using major methods of qualitative research, including observation, interview and document analysis. The study is at the stage of the analysis of the collected data.

The paper will present those findings of the research which explore the view and the practice of the research participants about the changes in their teaching practices as a result of exposure to innovative methods and techniques. The paper also draws on the findings of other research studies conducted in Tajikistan as well as the reports and documents of national and international agencies. Thereby, it has implications for the whole process of educational change, especially teachers' professional development

initiers in Tajikistan and elsewhere in the less developed countries.

Preamble

There is growing consensus among researchers, educationaists and those involved in the enterprise of education that professional development is a prerequisite for the improvement of the quality of education in schools. At the same time, there is recognition that uniqueness of the context and the changing environment make it hard to identify common elements of professional development which could be applicable across the borders and to different contexts. In this paper, which is based on the findings of the researches conducted in Tajikistan and the analysis of papers of governmental and non-governmental organizations, I shall try to show that contextual realities, which are so powerful in developing countries, call for a different approach towards professional development in developing countries such as Tajikistan. The implications are mostly drawn from the analysis of perceptions and perspectives of the teachers as research participants.

Background and context of the study

The collapse of the Soviet Union led to the emergence of newly independent countries which had to find their own way in a rapidly changing world. The development of these new countries was very much dependent on the economical and social structures inherited from the Soviet rule. In the wake of independence Tajikistan was one of the least developed republics of the Soviet Union and following the disintegration of the USSR it happened to be the most disadvantaged and the poorest country in the region. Following independence the situation in the country was exacerbated when the country plunged into three years of civil war (1992 - 1995) which cost the country over 50,000 human lives and seven billion dollars, according to the authorities.

Geographically, this is a small country (see Appendix) with an area of 141.1 thousand square kilometres and a population of six million, of which 73% live in the rural areas. Tajikistan is a mountainous country and the mountains take up 93% of the land. The mountain range known as Pamir covers mostly the eastern part of the country, which constitutes the Mountainous Badakhshan Autonomous Province (MBAP) of Tajikistan.

MBAP, also known as the Gorno-Badakhshan Region, regardless of the vast area it covers, falls short of arable lands and the population remains largely dependent on outside

assistance to meet their economic needs. The geographical landscape makes the region isolated from the rest of the country and further diminishes the capacity of the region for sustainable development. The role of the Aga Khan Development Network has been pivotal in upholding living standards and launching development activities in MBAP for the last 10 years.

Educational context

Following the collapse of the Soviet Union, education spending in Tajikistan suffered a rapid decline, rolling back most of the achievement the sector enjoyed during the Soviet rule. The most conspicuous losses which led to decline in the quality of education in Tajikistan, especially in MBAP, could be categorized as follows:

Teachers leaving the system

Decades of prestige of the teachers' profession came to an end. Teachers' salary dropped dramatically, leaving no chance for teachers to survive on the teaching payment. Many qualified teachers have left the system and went for better-paid jobs to provide their families with bare necessities. At the same time, those remaining in schools have to supplement their income by working in the field or market to fulfil their material needs. The qualified teachers who have left the system were replaced by unqualified teachers. According to the studies by an independent organization (Open Society Institute, UNESCO), approximately 40% of teachers in Tajikistan do not have appropriate qualifications. Most of the unqualified teachers are graduates of secondary schools. In MBAP, according to the regional education office, the number of unqualified teachers varies from district to district. The situation is worse in Murghab district where 55% of the teachers are unqualified. Approximately 36% of the qualified teachers have left the system in the last 10 years throughout the region. Many schools experience a shortage of subject specialist teachers in the areas of chemistry, physics and geography. Most of the qualified teachers have reached the age of retirement. Given the conditions of teachers and the teaching profession, very few young university graduates are attracted to the profession.

Lack and shrinkage of resources

Many schools continue to rely on resources from the Soviet time, e.g., blackboards, chairs, visual aids and textbooks. However, most of them are on the verge of breaking and losing their relevance. Newly published textbooks and other teaching materials

remain unattainable for the vast majority of students and schools. In MBAP the Aga Khan Foundation has introduced a rental scheme to enable children to obtain new textbooks and recover the expenses of the books. However, not all the students can afford to rent the textbooks.

Outdated curriculum

Four curriculum reforms have been introduced in Tajikistan during the last 10 years. These changes refer mostly to a revised list of subjects, some being dropped and replaced by others. Curriculum goals retain their declarative nature without attempting to provide a framework which aims at developing students' critical and creative thinking and problem-solving skills, and preparing them for the demands of the 21st century.

Lack of professional development opportunities

While an increasing number of teachers without any professional qualification are being hired, there are fewer opportunities for in-service professional development. In MBAP, regardless of the activities and professional development provided by the Institute for Professional Development (IPD) and other institutions and organizations, very few teachers get an opportunity to participate in the training programmes. The quality of the courses and training programmes is itself a matter of concern as the research findings indicate that teachers face difficulties in conceptualizing the new methods and strategies exposed to in the training programmes.

After merging with the education unit of the Aga Khan Foundation (AKF), IPD today is the major institution which provides professional training for teachers and other stakeholders and is taking a leading role in the improvement of the education system in the region. AKF provides financial assistance and external expertise to assist the implementation of IPD's endeavours.

The role of AKU-IED in providing IPD and other schools and institutions in the region with professional development teachers is remarkable. In 1993, during those difficult times for Tajikistan, AKU-IED embarked on its activities and took the first cohort of its students from the developing countries, including Badakhshan in Tajikistan.

Today, on the 10th anniversary of AKU-IED, the number of Tajik MEd graduates from AKU-IED has reached 14 and the number of graduates of Certificate and other

programmes probably exceeds 100. PDTs from Tajiksitan are engaged in various roles within AKDN and other institutions in Tajikistan and abroad. Most of those working in Tajikistan have now been brought together at the Institute of Pedagogical Development (IPD) and are actively working in the field of teacher training in MBAP.

Research Methodology

This brief description of the context was meant to lay down the general picture of the ground in which my research took place. I was commissioned by the Institute of Ismaili Studies to conduct a study on the implementation of Ta'lim curriculum in Badakhshan, Tajikistan, from March to June 2003. Ta'lim is an international programme in religious education for Ismaili Muslim students and aims to educate the pupils in the faith, history and culture of Muslim nations, in general, and the Ismaili community, in particular.

The research aimed to investigate and get insight into the processes that characterized the implementation of the Ta'lim curriculum. These processes were investigated through the lenses of teachers -- the deliverers of the curriculum. The research was based on a qualitative paradigm using multiple case-studies approach. Eight teachers from four schools of three districts (two teachers in each school of a district), and Khorog city, constituted the main research participants. The districts included Darvaz, Rushan and Ishkashim. The schools and the teachers were selected in a way that they were representative of their contexts and their constituencies. There were also secondary participants, including teachers in the schools, head teachers of the schools, deputy head of the regional education department, some parents and students. Their views and perceptions supplemented the perceptions of the main participants and helped to verify, clarify and understand deeper their beliefs and assumptions. The data was collected using in-depth interviews, classroom observation and document analysis. The interviews were held in the local languages including Shugni and Tajik. All the interviews were recorded and later on transcribed and translated into English.

The research did not simply explore the opinion of the teachers about the Ta'lim curriculum, but also attempted to explore their teaching practices, their pedagogical and content knowledge and their perception of the contextual realities which influenced their teaching. It has to be mentioned that there are no religious teachers as such. Ta'lim is taught by the teachers on a volunteer basis and these teachers usually have their own respective subjects to teach such as maths, literature, physics, etc.

Not many studies have been conducted on educational change in Tajikistan after its

independence from the Soviet rule. The few scholarly work conducted by Tajik scholars within Tajikistan are carried out in the old fashion manner, where the analysis of texts and government policies as well as historical analysis of the documents were the dominating factors in drawing conclusions and implications on educational change. The analysis also lacked a critical approach and grass roots perceptions of the changes and policies. The seminal work of Niyozov (2001) 'Understanding Teaching in Post-Soviet, Rural, Mountainous Tajikistan' explored the views of those who experienced the change at the grass roots level. Through a series of case studies Niyozov provided a comprehensive picture of the teachers' existence in MBAP, explored their beliefs and practices, and the importance of considering their perspectives for understanding educational change and the implementation of an innovation.

The research on the implementation of the Ta'lim curriculum was an attempt to continue the exploration of teachers' notions and beliefs in MBAP and get better insight into the ways of improving their pedagogical and content knowledge.

In the following sections I shall present the analysis of those segments of the findings that have direct implications for professional development initiatives in Tajikistan and, perhaps, in other less developed countries. I have also incorporated findings from the research by Niyozov and various descriptive and analytical reports of government and international organizations.

Findings and discussion

Innovation as a Western concept

The findings of the research suggest that teachers are aware of the new methods of teaching. They called them "metodi gharb", that is, the "western method", rather than new or innovative method. The term child-centred approach, "kudakmarkazi", had firmly established itself in their vocabulary and was referred to often during the conversation.

Teachers have been getting to know about these innovative methods in different ways. Some attended courses organized by IPD and Project Tajikistan of IIS. But most of the respondents said that they learnt about these from their colleagues who attended various courses. In this regard, a teacher mentioned: "I haven't learnt this in the course. Some of our teachers attended a course. We attended their lessons (after the course), saw and learnt (about group work.)."

Teachers were able to articulate the importance of child-centred approach which, according to them, gives children freedom, enhances their confidence and promotes their self-esteem: "The good thing about the western (method) is that it gives freedom."

However, regardless of the approval of the intentions of the 'western method', most of the teachers were apprehensive of the feasibility and appropriateness of these methods to their own context. A research participant expressed his concern as such:

> This 'metodi gharb', which we are to use in our classes, requires giving the child a freedom. According to me, if we let the child do what she/he wants, she/he will do anything - he/she will make noise, she/he may fight, she/he will talk too much. Maybe in the West the students have learnt this (how to behave) from their childhood, they do not make noise in the class. Here if we give them freedom they will make too much noise. They can't be left on their own. Maybe here we are not ready for this. Maybe our children lag behind in comparison with the children in the West.

Another teacher, recognizing the importance and usefulness of child-centered approach, believed that one needs time to make use of the method: "In the previous method the teacher did all the thinking and talked most of the time. Now, in this new method, we should encourage children to become active, ask and answer questions. The child should be in the centre. If we have time I think we can make use of the western method."

Some teachers believed that using new methods required good conditions, proper and plenty of resources. Shortage of resources including textbooks makes it hard to use a child-centered approach. A teacher puts it this way:

> To use the new method one needs resources. In our schools the conditions are indeed very difficult. We have shortage of resources, even the textbooks are in short supply. Therefore, we cannot use the child-centered approach. In the child-centered approach all the conditions should be there/provided. There shouldn't be any problem. Then we can expect from the child to be active and he may be able to participate in the solving of the problems. If we have good conditions, child-centered approach is possible, grouping becomes possible.

Child-centered approach is usually associated with children working in groups and answering questions and resolving problems posed by teachers. Teachers demonstrated

different understanding of the ways the groups should be organized. A research participant let her students be grouped on their own:

> They (students) themselves decide how they should be grouped. When we attended the course (an English course) in Khorog we were divided into groups. I should have also given them cards so that one group does one activity, another group another and third something different. But, it happened so that I have given one task to all of them.

Moreover, teachers were under the impression that the presence of a good student in the group ensures that the task would be clear to all the group members. In response to the researcher's question on whether the task was clear to the group members, a teacher said: "Each group had a good student; they help others (to understand)."

As it appears from the data, teachers have taken for granted many aspects of grouping and group work. Using group work has become a popular method or a trend, which each credible teacher was supposed to apply. The dynamics of group work, the skills of organizing and monitoring the group work were not reflected in teachers' actions and practice. It was more disturbing to observe the types of questions and tasks which teachers gave to their students to perform in the groups. Most of the questions were close-ended. A teacher asked her students to discuss in group and respond to the question: "Who has built Cairo?"

Nevertheless, teachers did not seem to be indifferent to their actions and some were reflecting and thinking whether the children learnt or not. Concern for children's learning seems to be the major determinant of their reflections on the new methods. A teacher expressed her concern : "This (western method) is good. The old method was good in the sense that even the weak students can be given attention and explained, but in group work he or she remains (unheeded), she/he is not given attention. The good students will answer (the question) and she/he (the weak student) is left out."

Concurrently, another teacher expressed his assumption that in group work the weak students would also be given opportunity to become active and learn. She said: "In it (group work) even the weak student does not feel miserable, and she/he becomes an active student, so that he or she is also able to express his/her view."

The observations revealed that teachers have taken for granted the complexity and requirements of enabling the children to work in groups. Teachers seem to be less aware

of the distribution of roles, encouraging the participation of all the group members, posing the relevant question and monitoring group discussion. They faced difficulties in controlling the level of noise in groups. Classroom management became a serious issue. Lack of teachers interference in the group activities and the types of tasks given to children made one wonder if real learning was taking place in the groups.

Western methods in teachers' understanding posed challenges in other aspects of teachers' practices as well. Correcting students' mistakes and errors, for example, was a concern for some of the teachers. A teacher points to this:

> In my opinion, when the teacher used to correct us, we got to know our errors. If we do not correct these students, next time they are going to repeat the same mistake over and over again. According to the western method we should not react and interrupt the student. Let him speak whatever is in his mind. The good thing about the western (method) is that it (gives) freedom. From the other side if we correct our student, he or she might improve.

As it appears from the data, the so called 'Western method' is a new trend in the practices of the teachers. Regardless of its positive aspects (giving children freedom), it remains alien to their beliefs. They do not seem to have conceptualized and internalized the skills, the knowledge and understanding prerequisite for productive ways of using the new approach. However, they try to incorporate it into their practice as a popular, innovative method, accepted by everyone and to be used by all. Yet they remain conscious about their moral obligations to make sure that children learn. Some teachers are beginning to critically reflect on the appropriateness of the western methods to their practice and context. The contextual realities, which defy any innovation, are discussed below.

Contextual realities

Teachers unanimously expressed their deep concern about the realities of the context which make it hard for them to keep their obligations as moral agents of society. They juxtaposed themselves against the society. Society expresses itself in the government bodies, ministry of education, education office and the community in general.

With the start of the deterioration of the economic conditions in the country, the government has issued several directives and formulated policies regarding the economic well-being of teachers. However, most of them are only rhetoric and provide only lip-service to the

teachers. Teachers remain the least state-paid workers. A teacher expressed how the rise in the salary makes no difference to her living conditions: "The government is raising the teachers' salary, but it is nothing. A salary rise of 20% (which is approximately US$2 added to the salary) is much less than the ever-increasing market prices."

Another teacher pointed to the fact that government laws about relief from paying for utilities is not implemented in reality: "The government has issued a directive that teachers are free from paying for electricity, but this is only on paper. They have made the law but it is the local government which is supposed to cover it and since they do not have money, the teachers have to pay for it."

Teachers also provided other examples where their rights have been violated. They have been forced to subscribe to newspapers against their will and the subscription fees were deducted from their salaries.

> We have to subscribe to this. The subscription is 24 somoni per year. And there is always quarrelling going on between the teachers and the school's administration. If I subscribe to this newspaper I have to pay 12 somoni. If I am going to give 12 somoni for this, how I am going to feed my children. The central government presses the education officers and they, in turn, put pressure on the schools. Whether you want it or not you have to pay this much for the subscription. It is compulsory.

A research participant described another situation with regard to life insurance, which is supposed to be voluntary:

> Another problem is the issue of life insurance, which is supposed to be voluntary. A representative from the government came and got us insured. They have taken 2 somoni (1/10 of the salary) from us to get our life insured. Some of the teachers did not want to get themselves insured, but someone signed in their place. They rebelled and said that this is not our signature. The money that was deducted from their salary was not given back. The benefit of the insurance is also not clear. They have not shown us any contract and we do not know what period it covers. We have no document. With all, they deduct from the teachers' salary and you are forced to run after them and find out.

As the data reveals the teachers are subject to different kinds of mistreatment. This could

be traced back to the Soviet time when schools and teachers were looked upon as means of implementing government policies and ideology. The change in the socio-economic conditions of the teachers makes it hard for them to keep up with the expectation of the government, especially when the status they had been bestowed during the Soviet time has vanished.

The findings indicate that it is not just the teachers who bear the burden of mistreatment, indifference and neglect by the authorities. The whole school community, including the students, are subject to unjust treatments. The students pay not only for the rental of new textbooks, but also other recurring expenses. A teacher was wondering how some of the charges could be relevant to the students: "In the past this classroom journal was provided by the Ministry of Education. Today, this is also from the students' money (students are charged for it). Why would the student need the classroom journal?"

Paying for the new textbooks was a serious concern expressed by the teachers. The old textbooks from the Soviet time were getting worn out and the schools had little capacity to acquire new books. The new textbooks were rented out to the students. There was no exemption or reduction in prices. At times, students paid more than the real price of the book. A teacher stated:

> Students pay for all of them (textbooks). They are given on a rent basis. A student will pay 800 diram for one book (for one year). Next year another class will study it and will pay a little less 750 diram for this book. This will continue until the market price of the book is paid and after that the book may become private. But, this is also not certain. Let's take the English textbook. Five years have passed, the student should stop paying, but they are still paying.

Students paying for the expenses in schools put additional pressure on their parents. Parents who have more children are affected most. A teacher, who is also a parent of four children, expressed her concern as such: "The books are all payable. The book I am holding in my hand (History book), my daughter paid 800 diram ($0.25) and she has to take 14 books. If she pays for lets say 10 of them that will be 8,000 or 8 somoni. And what if there are 4 students in one family."

In the face of increasing expenses in the school, many parents cannot afford to pay for the textbooks and have given up on the education of their children. Those children whose progress in the school is not satisfactory are affected most. A teacher provided the

following insight:

> The Education Office brought them, you are forced to sell them to the students, but the children can not afford to buy them. Then those who want their child to study they do everything to buy the textbooks for their children. But some, whose child has not made good progress in the school, they say, 'what is the point in us buying books. He (the child) is weak anyway, why should we waste money.'

As it appears from the data, the conditions of the new realities made teachers and parents to look differently at some of the values they observed. An unconditional value of education observed for decades has lost its prominence. They seem to be more pragmatic, practical and submissive to the realities of their lives' conditions. Meaningful changes in education are associated with good conditions for work, resources and the respect of the community and the authorities.

Regardless of the difficulties, teachers are not passive recipients. Their non-action has its own reasons, some rooted deep in the cultural norms and perceptions (Niyozov). Some of them go to the extreme to voice out their concerns. A teacher recalled a strike that took place in his school a couple of years ago: "There was a strike in our school two years ago. But this can only work if all the schools in the region strike together. But, if it is the only school, then you will be told that if you do not want to teach, you can go. There are many teachers, we can bring somebody else."

Another teacher described how they wrote an article to solve the issue of electricity without any result: "Recently, our school wrote an article about the problem of electricity saying that we, teachers, should be free from the burden of paying for the electricity. It did not produce any result."

Some teachers identified lack of unity among the teachers as a reason for their failure to get recognition (as with the strike) and draw attention towards their problems. At the same time, being in a community of teachers requires one to follow the common path with the majority. Divergence from the path may create discomfort and additional stress. This point is well reflected in the following conversation between the researcher and a participant. The district was celebrating the birthday of Rasulov, one of the leaders of Tajikistan during the Soviet period. The teachers were required to pay for the organization of the events of the celebration, which was against their will:

R: Why did you have to pay?
T: Because one pays, the other pays and you also have to pay. Otherwise, they say that this one is a miser, he or she is this and that; 50 diram is not that much. And then you have to.
R: What if a teacher does not pay?
T: He is said to be a miser. But they do not think that he is fighting for his rights, but we are calling him miser.

This example reflects the legacy of the past that continues to haunt teachers till the present. Depending on their knowledge, skills and opportunities, teachers are dealing with the problems they encounter. Critical and problem-solving skills, as well as courage, support and leadership seem to be essential components to enable them to be more proactive and effective in their struggle for their rights and the recognition of their work.

Teachers' work and practice are inextricably intertwined with their lives. The work is deeply embedded in their lives, in their pasts, in their biographies, in the culture of traditions of teaching to which they have become committed (Hargreaves, 1995). The findings suggest that it is unlikely for teachers to take an innovation seriously if their living conditions are not taken seriously. A similar conclusion is drawn by Niyozov (2001) who maintained that, "Teachers will not create new ideas or acquire innovations, if their life is separated from their work, these cases suggest".

The above discussion reveals some of the reasons teachers leave the schools. This poses a real challenge for professional development activities currently underway. One of the concerns expressed by the trainers of Ta'lim teachers was that once the teachers were trained they leave the system and they (trainers) have to start from scratch by training new teachers. Change initiative need to seek ways of positively affecting teachers' lives and experience, including the one out of school.

Implications for professional development

Conceptualization

The findings of the research reveal that teachers are aware of new approaches to teaching and learning. However, there is a considerable gap between awareness of the methods and mastering and deeper understanding of these methods. Teachers' understanding about the new methods is at the level of superficiality. Conceptualization of the new methods seems to be the most needed focus of professional development endeavours.

Teachers need to acquire the skills and knowledge of the techniques which make the child-centered approach meaningful and productive. Teachers' awareness and attempt to use the child-centered approach is a positive sign, and could also imply the beginning of their journey towards mastering and internalizing the techniques of using the innovative methods. However, lack of support to understand and to move in the right direction may have an adverse effect on their attitude and approach towards the new methods and they may well revert to their prior teaching -- a teacher-centered approach with which they are more comfortable and experienced. There is a need to cultivate proper skills and attitudes towards innovative methods in teachers. Professional development needs to see it as a priority and Professional Development Teachers need to possess knowledge and skills to accomplish it.

Provision of resources

Resources played and continue to play an important role in the effectiveness of any methods of teaching. Many teachers associate the feasibility of using innovative methods with availability of teaching and learning resources. Teachers heavily rely on textbooks and are disturbed by the fact that many students are not in a position to purchase or rent the textbooks. Developing their own resources is a time consuming-activity, which teachers can not afford. Most of them have to go to the field or market after teaching in school to provide the necessities for their families. The implication of the analysis of the findings is that provision of the resources, especially textbooks, needs to be a priority of the international organizations undertaking initiatives in improving the quality of education in the region. The rental scheme, so popular with many institutions, needs to be critically examined. The findings indicate that 'marketization' of education grounded in neo-liberal theory is likely to promote divisions and disparity between the poor and the rich, the good student and the weak. This approach is currently advocated by most of the international organizations and reflected in their policies of providing aid to the poor countries, including Tajikistan.

Power of context

Teachers' beliefs and attitudes are largely shaped by their life experiences. Decline in the recognition and respect for teachers by the community and the authorities seem to have tremendous impact on teachers' work. Their emotions and hopes are negatively affected. This is probably the main reason that many qualified teachers have left the system.

Educational research is fraught with evidence of contextual realities which defy the implementation of an innovation (Guskey, 1995). In order for professional development initiatives to succeed, it is important to recognize the effects of the contextual realities and place professional development in a wider context (Niyozov, 2001). This recognition is essential to broaden ones outlook and develop initiatives that lead to tackling the contextual problems teachers face. Tackling of contextual problems implies not only creating a conducive environment in school and supply of materials and equipments, but also influencing the government policies and enhancing the recognition and appreciation of teachers' job within the society. This might be perceived as a shift from the focus on enhancing the teachers' knowledge and skills, but is essential to make possible the end purpose -- improving the quality of education.

Models for professional development

In this section I would like to present three models for professional development with simple illustrations. The first model may be perceived as implications of the analysis of the research findings. The second and third models represent recommendations and way forward in implementing the professional development initiatives in Tajikistan and elsewhere in the developing countries.

Model 1

The analysis of the findings indicates that professional development is perceived something which has 'to be done to teachers'. We may illustrate it as such:

$$PD \longrightarrow O$$
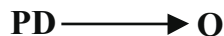
This approach assumes PDTs as those who possess the right answers and are going to transmit it to the teachers telling them what to do and how to do it. It resembles the transmission model of teaching where students are perceived as empty vessels to be filled from the spring of knowledge possessed by the teachers or adults alone. PDTs are apt to fall into this trap, not just by their assumption that they are there to equip teachers with the innovative methods and strategies of teaching, but also by the expectation of the teachers themselves, who are accustomed to be told what to do as what was happening in the training courses in the past and the treatment by the inspectors from the education office. A research participant put it bluntly : "You have been attending my classes, but you are not telling me how my lesson went…. I think our Soviet method was good when the inspectors came and told you what was wrong in your lesson… so you know…"

Professional development acts as a dominating force which is capable of changing the beliefs and practices of teachers in its own way. Professional development, in this model, is likely to promote dependence on teachers and engenders resistance towards new ideas and methods of teaching.

Model 2

PD $\longrightarrow$ ⬚

This model of PD emphasizes the importance of viewing professional development in a wider context. It shows that for professional development initiatives to succeed, the wider context in which the teaching and learning process is taking place needs to be put in perspective. This model calls for re-examining the existing theories of professional development that mostly concentrate on enhancing teachers' pedagogical and content knowledge and are concerned with the type and content of training. In this model the question "How to improve the teachers' knowledge?" is extended to "How to improve the quality of education?" Contemplating on how to improve the quality of education enables one to discern the wider context in which education is to be carried out.

Placing professional development in a wider context enables reflection on the forces of change, which are increasingly activated and intensified. Context is a multidimensional concept. Physical or material dimension of it encompasses the physical and organizational structure of schools, resources, time etc, which are more or less bound by area, quantity and time. Physical factors have played and continue to play an important role in the teachers' receptivity to the innovative approaches to teaching and learning. They determine the feasibility of utilizing the approaches in practice.

Conceptual dimension points to the existing trends in the policies of the government, especially those with regard to education. It also indicates the existing forces, both internal and external, their interplay, and their influence on curriculum development, the government policies and the teachers' outlook and beliefs. It necessitates reflection on the global forces, which shape and reshape the global trends and influence the development and the political motivation of the governments in the developing countries.

Professional development needs to address the question of how to influence the educational policies of governmental and non-governmental organizations. And, therefore, PDTs need to acquire skills and knowledge and develop capacity to be able to reflect on the global and local trends and issues, and work out the optimal solutions in carrying out

their endeavours.

Model 3

This model adds a new dimension to the first two models. It suggests the importance of reflecting not only on the wider context, but also reflecting the influence of the context on himself or herself as a PDT. The significance of this model is that it enables PDTs to see them as subjects and humans who may also be influenced by the changing world, by their interactions with the people, with ideas and situations. Learning and negotiation becomes fundamental aspects of PDTs' endeavours. PDTs have to negotiate with their own beliefs and be critical towards their own actions in their relations with other stakeholders. This model raises the status of teachers as partners rather than subordinates. It calls for respect for teachers' actions and beliefs and to attempt to understand their perspective. Listening to teachers is not just to explore their perception, but also to explore the solutions that are often found in conversations.

Conducting educational research is central to this model. Research enables exploration of teachers' beliefs, their practices and the surrounding world. This would also enable PDTs to develop the capacity to reflect on various issues and come up with solutions to the problems posed.

A thousand years ago a great Ismaili philosopher Nasir Khusraw, pointing to the importance of developing reflective capacity in human beings, said, "It is necessary to look for something that can increase the power of mind and good sense." Critical reflection on our experience, knowledge and beliefs is probably the most important thing which increases the power of our mind and good sense.

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Appendix

MOVING TOWARDS EDUCATIONAL LEADERSHIP

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Abstract

Educational leadership focuses on building a shared vision, improving communication, making decisions collaboratively and remains consistent with the desire to bring about school improvement. Literature reveals that if head teachers / managers' practices are not consistent with the above-mentioned areas of leadership; the expected outcomes of schools become difficult to achieve. In order to build leadership capacity for school / organizational improvement, Aga Khan University-Institute for Educational Development (AKU-IED) has offered various professional development programmes under the USAID Project III to the collaborating Non-Government Organizations / Community Based Organizations (NGOs / CBOs) working in the education sector of Sindh. These Professional Development Programmes are aimed at facilitating the participants in re-conceptualizing their notions of leadership and encouraging them to foster practices of collegial interaction in setting curriculum, instructions and monitoring evaluation and documentation processes at individual, school and organizational levels. Looking at the observations done by the programme instructional team, during Course Participants (CPs) practicum work, their reflections and presentations, field assignments and also the case studies of few programme graduates, provided us with evidence of some change in educational leadership and management practices. These include moving from individualistic approach to team building exercises, playing active role in curriculum setting, improving monitoring, and evaluation and documentation practices. This presentation highlights the strategies, experiences and challenges of the offered programmes with particular concentration on course participants' application of the newly acquired knowledge, skills, attitudes and the process of institutionalizing change in their context.

Introduction

Laws and Dennison (1991) mention that head teachers spend most of their time on activities that enforce the role of a 'chief executive' whilst professional leadership

actions get less significance. There is a generally held opinion among educators and researchers that school improvement is directly related to the beliefs and practices of leadership, but a majority of Principals and Head teachers in Pakistan do not have an adequate educational management background, which has affected the quality of education and school improvement. In fact, a participatory decision-making strategy and a decentralized model for management is necessary for successful school improvement (Hicks, 1956; Sinah, 1977; Memon et al., 1999). The current National Education Policy of Pakistan (1998-2010) also endorses that the professional qualification of educational managers including head teachers does not cater to the needs of managing and supervising schools effectively, which has severe implications for the improvement of quality of education. Kenneth, Leithwood and Daniel Dike (1999) identified six distinct conceptions of leadership: instructional (influencing the work of teachers in a way that will improve students' achievement), transformational (increasing the commitment and capacities of school staff), moral (influencing others by appealing to notions of right and wrong), participatory (involving other members of the school community), managerial (operating the school efficiently) and contingent (adopting the behavior to fit the situation).

The AKU-IED has been engaged in the implementation of the proposed initiatives from The Aga Khan Foundation, Pakistan (AKF,P) to work with a selected number of NGOs / CBOs to enhance their institutional capacity building. This helps them to provide an equity, access and quality education to all children generally and girls, specifically.

Strategies used for capacity building of educational leaders

In order to achieve the target of education leadership development, two broad-based strategies were employed. These are:

Certificate in Education: Educational Leadership and Management

Evolving a reflective model and process used in developing Certificate in Education: Educational Management and Leadership Programme. Four programmes of Certificate in Education: Educational Management and Leadership were offered during the project tenure. This programme was designed as a field-based programme containing six modules of one week each:

a) Reconceptualizing NGOs / CBOs' role in managing education
b) Developing effective management and meadership practices
c) Developing effective educational and community leadership

d) Understanding the role of curriculum, instruction and assessment in education
e) Developing understanding about the process of school improvement
f) Institutionalizing change process in community schools

The overall aim of the programme was to facilitate NGO / CBO leaders and community school head teachers as 'community builders' with effective leadership skills and attitudes to work with the community for the promotion of quality education in the rural and semi-urban areas of Sindh. The professional development team also provided professional support for the course participants through planned follow-up field visits for the application of the newly acquired knowledge and skills in their institutions.

Short course in monitoring, evaluation, and documentation

Monitoring and evaluation is being increasingly recognized as an indispensable management function of any organization. Considering the importance of monitoring and the evaluation of NGOs / CBOs' educational initiatives, AKU-IED designed a short course in monitoring, evaluation and documentation for senior and middle management of the NGOs / CBOs. This course was designed on the basis of needs assessment. A five-week course in monitoring, evaluation and documentation containing a field-based practicum was also conducted. The participants were exposed to alternative practices of monitoring, evaluation and documentation for enhancing their understanding in these areas.

One programme on monitoring, evaluation and documentation was conducted, and those who participated in this programme were from all management layers. The candidates developed their skills in preparing a framework of monitoring and evaluation including performance indicators and monitoring tools. They also developed skills on how to analyze monitoring and evaluation data and write a report for documentation purposes. Community motivators benefited from these programmes. The purpose of these programmes was to develop serving and aspiring head teachers and community motivators as 'effective educational leaders'. These participants developed a wide range of skills such as effective communication, participatory decision-making, time management, reflective practice, community participation, monitoring and evaluation, managing change, curriculum enrichment, supervision. The participants were also exposed to processes engaged in organizational development analysis.

Achievements

- While working in their respective institutions, teams observed that the action plan

and practicum assignments provided graduates to institutionalize the change at the organizational level. NGO leadership also recognized the effort initiated by the graduates for school improvement. As an NGO leader commented:

> our certificate in education, 'Educational Leadership and Management' graduate used to be silent but now they discuss issues and try to justify their suggestions. We were expecting that they would try to bring about a change on a classroom level but they try to work at the school level also.

Some of the graduates who work at the organization level re-visit or develop the vision and mission of the school / organization and try to convert their long-term planning based on their learning about strategic planning with the collaboration of the staff.

- During the last two years of the project term it was continuously observed that in most of the schools, especially where learning resource centres function, the element of team building and professional development of teachers was gaining importance. There were a number of programmes being conducted not only for their own teachers but also for cluster schoolteachers. The impact of such programmes has been overall improvement in various areas, such as student retention, improved academic performance of the students (school results), and transition from a teacher to student-centered environment and from unplanned to planned teaching.
  A case study of a school situated in a rural area of Sindh brought forward the aspect of team building. A graduate (Certificate in Education: Educational Leadership and Management) from the school explains that the impact of the programme has brought all the teachers together on one platform. They (teachers) are gelling into one unit because of continuous professional activities. The same graduate at the graduation ceremony of one of the programmes at the LRC reflected:

  > Before the AKU-IED intervention I was only a school administrator, but now I am able to contribute in LRC activities as a equal team member. Previously I was more self-centered and the only decision-maker in all school-related matters.

- During the follow-up visits, it was observed that the graduates' attitude changed from compliance towards diagnostic strategies. One of the graduates said, "Field visits help us in modifying the instruments of monitoring and evaluation and making it more diagnostic, thus intended to cater to our needs".

- One of the graduates of the programme has ten years of teaching experience and manages a boys' primary school in a semi-urban area. After graduating and spending four months in her school, she expressed her sentiments in a formal interview (Project Annual Report 2003) about the programme, saying that:

  > The programme helped me in many ways, for instance, my personal and professional growth prospered (because after these programmes I got promoted to the position of head teacher), I am now able to justify my actions, being creative and innovative in decision making, solving problems and more. Additionally, not only did the programmes increase my knowledge, rather they also enhanced my skills, attitude and values. They helped me tremendously to re-conceptualize my role as a pedagogical leader. I may not be a perfect pedagogical leader but thanks to the instructional team, I stand today with full confidence and patience. I am able to reflect on my current practice to meet the challenges of improving the quality of education in my school. I remember when I joined my school I could hardly talk in front of others. Now I am confident in sharing my experiences, knowledge and skills with others. I must say that the credit goes to AKU-IED.

  She went on to express her views by saying:

  > The programmes seemed very positive and thought-provoking, and this has enhanced my level of commitment and enthusiasm. During the programme, we were encouraged to critically examine, re-conceptualize and enhance our understanding regarding organizational dynamics, organizational and school culture, roles and responsibilities in relation to community mobilization and promotion of education, especially female education, team building for sustainable change, understanding notion of curriculum, instructions and assessment, effective supervision practices and reflective practice. Now, I have learned how to cope with challenges. All this information has been extremely useful for me, and I implement these in my native context accordingly.

- Another graduate who serves as regional manager at his NGO, shared his reflections (Case Study in progress, 2003) about the AKU-IED programme impact on his professional growth by saying that:

  > The programme provided an opportunity to us to developing our management and leadership skills to become effective educational and

community leaders. Also during the programme, we were encouraged to systematically monitor and evaluate educational practices in order to make decisions for maximizing the effectiveness of NGO / CBO schools. Reflective practice helped the participants in many ways, for instance, seeing personal and professional growth, being able to justify their actions, being creative and innovative in decision making, for solving these problems. Not only did the programme increase my knowledge, but it also enhanced my skills, attitude and values. It helped me tremendously in re-conceptualizing my role as pedagogical leader of effective schools. Before coming to the AKU-IED, I was interested in talking about people, I used to discuss people rather than issues / problems but now I have learned that it is better to discuss issues / problems rather than people.

The field-based component was also an integral part of the programme. These visits were planned in order to support the CPs in the application of newly acquired knowledge and skills in their respective organizations. To gain maximum benefits from the field visits, the CPs were provided professional support in completing practicum. This practicum included; a) developing a case study for implementing curriculum; b) assessing organizational capacity; and c) conducting action research. During another visit to the same organization he shared the information that in the recent annual performance review at his NGO, five regional teams had presented their annual performance and his regional team won the best performance award. He acknowledged that the actual change process started in the year 2000, when he graduated from AKU-IED. He also praised the role of USAID Project III team by acknowledging that AKU-IED graduates have played the role of a catalyst in his organization.

- Another graduate, in a formal interview (Case Study in progress, 2003) with the team, expressed his sentiments about the programme by saying that he believed that his experiences at AKU-IED enhanced his confidence and empowered him to be a better Vice Principal. In his own words:

    I started my career as a science teacher, gradually moved up to senior teacher and simultaneously worked in a local NGO as a social organizer. One year after joining and gaining teaching experience, I was assigned some managerial responsibilities besides my teaching. On account of those responsibilities I was given an opportunity to join the Certificate in Education: Educational Leadership and Management Programme at

Aga Khan University Institute for Educational Development (AKU-IED). After returning from the programme, I was asked to have a meeting with the school's 'Boards of Governors'. For the first time in my teaching career, I actually felt confident while talking to the board!. In that meeting, they discussed what I had learnt from the programme. Two months later, the 'Board of Governors' called to share their decision regarding my future role in the school as the project coordinator.

Challenges

- Professional Development Team's simultaneous involvement in more than one programme became a challenge in terms of the diverse nature and requirements of different programmes and availability of their time.
- Meeting with the diverse needs of graduates, such as
  (i) those not fluent in Urdu and English languages, and
  (ii) those belonging to rural, sub urban areas with limited teaching experience. Special attention was paid to such needs by supporting them in small groups in the classroom and providing them with an Urdu version of the programme handbook, articles and other reading material.
- The programme was very demanding in many ways, especially in terms of time, commitment and resources. It was a field-based modular programme, in between which were three practices. During the three weeks of practicum, the instructional team spent twelve to fifteen days, including Sundays, visiting CPs from Karachi to Mithi. Very little time was available for other professional-related activities or planning for the next module.

Conclusion

The uniqueness of the project was that throughout the four years of the projects tenure, there was a continuous interaction between the participating NGOs / CBOs' stakeholders and the project implementation team, which resulted in ongoing professional support from the project team. They were eventually able to become change initiators in their respective organizations.

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ONGOING IMPACT OF THE "ADVANCED DIPLOMA IN EDUCATION: MATHEMATICS"

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Abstract

The Action Research Project in Mathematics Education was undertaken to study the impact on teaching and learning, of strategies introduced in the Advanced Diploma Programme in Education: Mathematics (2003), offered by AKU-IED. This programme is a one-year field-based programme. The main aim of the programme is to develop exemplary teachers who are reflective practitioners. Teachers from sponsoring schools participate in the programme which is designed such that seminars are held at AKU-IED during summer and winter breaks and on Saturdays, when most schools are off. During term time tutors visit the participants in the school. The purposes of field visits include: provision of classroom support to participants in their efforts to implement their learning in the real classroom; identify areas where participants require further support; and to enable reflection.

Action research was carried out by the tutors and the programme participants where certain teaching strategies were identified, introduced and implemented in the classroom. The implementation process of these strategies was studied by the programme tutors. The purpose of the tutors' research, which is reported here, was to generate local evidence of impact and look for micro impacts which would help justify teaching these methods to teachers more generally.

Findings from the study showed that the teaching strategies introduced as part of the Advanced Diploma Programme led to a positive change in the teacher's classroom practice, in the mathematics that the students learnt in the classroom, and how they learnt it. However, the study also revealed that certain contextual and other factors mediated the potential of these strategies to impact the classroom. The findings reported here primarily discuss: the teacher's subject matter knowledge, their experience and ability to handle student responses and their critical (as opposed to an unquestioning) use of the strategies introduced.

Introduction

The Action Research Project in Mathematics Education was undertaken to study the impact on teaching and learning, of strategies introduced in the Advanced Diploma Programme in Education: Mathematics. In the class of 2003, there were fifteen teachers from schools in Karachi. These schools included institutions from the government sector, private schools and AKES schools. The instructional team comprised of four tutors.

The main aim of the programme is to develop exemplary teachers who are reflective practitioners. Teachers from sponsoring schools participate in the programme, which is designed such that seminars are held at AKU-IED during summer and winter breaks and on Saturdays when most schools are off. During term time tutors visit the participants in the school. The purpose of field visits include: provision of classroom support to participants in their efforts to implement their learning in the real classroom; identify areas where participants require further support; and to enable reflection. Hence, to support reflection and enable a questioning stance towards their practice participants were expected to engage in small-scale action research projects. The cyclical nature of the programme where AKU-IED based sessions were followed by periods of intensive work in the field lends itself to conducting action research.

As part of the programme, participants were introduced to new teaching approaches and strategies. These include the following:

- **The do-talk-record framework (Open University, UK).** According to this framework, students are encouraged to do the mathematics in pairs or small groups. Concrete and semi-concrete materials are provided to aid the work. Students are expected to record their mathtematics using words, pictures or symbols and discuss the rationale of their decisions.
- **Cooperative learning strategy (Johnson, Johnson, & Houlbec, 1993).** According to Johnson et al (ibid. pp. 6-12), there are five basic elements that should be incorporated in small group work to make it cooperative learning. These include a) individual accountability; b) face to face interactions; c) positive interdependence; d) group processing and e) social skills i.e. to use appropriate interpersonal skills in small group work.
- **Use of problem solving strategies (Polya, 1957).** These strategies enable a focus on the problem solving process by suggesting iterative cycles of plan-act-review.
- **Open-ended questions to promote mathematical thinking (Zevenbergen, 2001).** These are mathematical tasks and/or questions that do not have one correct answer.

Rather, a number of possible answers or solutions are possible, acceptable and encouraged.

Methodology

The action research reported here had two interwoven strands: in one, the course participants learned to research their classroom practice. Their focus was to examine the use of the selected strategies introduced in the course, in developing teaching on their own.In the second, the tutors were involved in researching classroom impact processes resulting from the teachers' research. The primary purpose for the tutors was to examine the ongoing impact of the teachers' implementation of new strategies in the classroom context. The aim being to generate local evidence of impact and look for micro impacts that would help justify teaching these methods to teachers more generally. By impact we mean the process of change that resulted as new teaching strategies were introduced in the classroom.

Action research was seen as an appropriate approach to study impact, to understand how and if in-service teacher education brings about a change in the classroom. This is because action research is about bringing around an improvement in a social situation through participation in cycles of planning, acting, observing and reflecting, thereby creating possibilities for change and transformation (Kemmis & Mctaggart, 2000). While research on change (e.g. Fullan, 2001) has shown that when new ideas and practices are introduced in schools and classrooms, they are interpreted and adapted by the teachers (and others) who put them into practice within the context of their own situation, existing beliefs and practices. Thus the movement from source inputs in teacher education programmes to student outcomes is an adaptive process and action research provides an appropriate methodological approach to study this process and its outcomes.

The fieldwork spanned the period of one year and involved in-depth interaction among the teachers and the tutors-researchers. Each tutor-researcher worked with a small group of teachers as research participants. This included observing classrooms at least once a month. Each observation was preceded by a pre-observation conference and followed by a post-observation conference. A purpose of this conference was to provide classroom support and to sustain reflection through identification and discussion of emerging issues and concerns. The classroom observations and conferences were recorded in the form of field notes. In some cases, classroom interactions were also recorded on tape recorders.

The tutor researchers also met regularly. A purpose of these meeting was to sustain the

process of ongoing analysis through a focused discussion of similarities and differences in findings and identifying emerging issues and questions. These meetings were recorded on audiotapes and later transcribed. Teachers and tutor researchers maintained reflective journals. These journals were mainly to promote a dialogue regarding the teaching and learning issues arising during the course. Data comes from over a 130 classroom observations and as many pre and post observation conferences with the teachers, and about 20 tutor researcher meetings.

Findings and discussion

The findings and discussions reported in this paper draw from work with teachers, Reshma, Tehmina, Abida and Samina (pseudonyms). These were mid-career female teachers, teaching mathematics to classes VI and VII. Each of the four tutors worked with one of these four teachers individually. These cases provide representative examples of issues and themes that emerged largely in all the classrooms.

Findings showed that as her area of inquiry, the teacher Reshma looked at the use of concrete materials in mathematics classroom. She identified this area because she usually used concrete material to teach mathematical concepts but was not sure if she was using them effectively. She now wanted to study the process of using concrete materials to see whether or not they were being used effectively so that learning was facilitated.

Similarly Tehmina had also identified her action research focus as the use of concrete materials, as students in class VII worked at mathematics tasks in small groups. Her reasoning, as evident from her reflective journal, was:

> In my 13 thirteen years, I have not used this approach to teaching which I am using now after my training at AKU-IED. while working on a simple activity of investigating area and perimeter in the sessions at AKU-IED, I learnt, that children do not learn just by being told or by making shapes on the blackboard. Children won't be able to learn until they do it themselves and until they do get a chance to touch it themselves (Tehmina's journal entry translated from Urdu).

The other two teachers, Abida and Samina, introduced "cooperative group works" such as small group work incorporating some elements of cooperative learning strategies. Abida said that she used group work to maximize students' learning. From the observations it appeared that Samina's purpose of introducing cooperative group work was to enable

each member of the group to share her ideas about the task and develop mathematical thinking in the process.

Findings show a positive impact on the classrooms observed with the new teaching methods. For example, there is evidence to show that students' shared their real life experiences in relation to mathematics, offered alternative solutions to the mathematics problems and solved questions with less dependency on the teachers, when the teachers tried out new methods of teaching. Similarly the change process studied showed a positive impact on the teachers' classroom practice resulting from the engagement in the examination of their implementation process during the advanced diploma project. Certain issues and challenges were also identified which moderated the potential of these strategies to impact students' learning.

These findings are discussed in further detail below.

Student outcomes

The study provided immense opportunity to see how the student learning outcomes were impacted. Here outcomes have a broader focus that includes academic achievement, students' participation, and development of social skills. A reason for including this broader focus is that the Advanced Diploma Programme gave a lot of emphasis in encouraging students to develop skills and attributes in order to enable them to work cooperatively with their classroom peers.As students worked at mathematics tasks in the classrooms where the teacher used involved concrete materials, there was evidence of positive impact on their learning process and outcomes. This was observed from the kinds of questions that students asked in the classroom, the discourse in the classroom which was broader, and richer, than the discourse in a classroom where the textbook is the only resource and teacher transmission is the only strategy used. The kind of mathematics tasks that the students were able to do were beyond the scope of the textbook and investigative in nature.

To exemplify the findings from classroom data, some episodes are shared. In one class, Reshma gave the students cutouts of different quadrilaterals and asked them to measure the interior angles of the different shapes such as squares, rectangles, parallelograms, trapezium, rhombus and other quadrilaterals. She planned that once the learners measured all the angles, she would ask them to add all the angles to explore the sum of angles of a quadrilateral. Following is an extract from one episode during Reshma's lesson, where 'L' represents the learner and 'T' represents the teacher).

Learners measured three angles, A1, A2, and A3.

1. L2: Stop, Stop. There is no need to measure the fourth angle (and he started adding the three angles).
2. L3: What are you doing?
3. L2: The sum of three angles is 250° therefore fourth angle is 360° - 250° = 110°.

The teacher visited the group.

4. T: Did you measure all the four angles?
5. L3: No miss, Ali said we need to measure only three angles and fourth one we can calculate.
6. T: Ali, why do you say that?
7. L2: Miss, in the previous class you asked us to cut different triangles, tear their vertices and paste them on a single point. It was 180° in types of triangles. I think the same would apply for the four sided figures.
8. T: Are you sure?
9. L2: If square and rectangle vertices are torn and brought together at a point it will make 360°. Like different triangles have 180° as sum of the interior angles, so four-sided figure will give 360°.
10. T: Good observation.

The above episode exemplifies the change in the classroom discourse. The change was in the nature of interactions. Students were now asking questions (2. L3), providing explanations of their thinking (lines 3. L2, 5. L3, 7. L2) and making linkages between the new topics being introduced and their previous learning (refer 7. L2 above).

Similarly, evidence of positive impact of cooperative group work was found in Abida's classroom. The episode discussed below is taken from a lesson on ratios taught by Abida.Abida began by presenting a problem which she had invented herself (See box below). She asked the students to solve the problem in their respective groups. She then engaged them in sharing their solutions with the class.

The teacher wrote on the following problem on the board.

Problem:
The cost of three copies is Rs. 15. What will be the cost of 5 copies?

The teacher then wrote the following questions on the board for students to discuss:

- Can you put ratio between two quantities such as number of copies and cost of copies?
- What would be the relationship between two ratios?
- How would you find the unknown cost?

The teacher moved around while the students solved the problem. After that she invited them to explain the process on the board.

S1: Increase in number of copies will increase the cost.
   Ratio between number of copies = 3:5.
   Ratio between cost of copies = 15: 25.
T: How did you get 25?
S: The cost of one copy is 5 therefore I multiplied 3 and 5 by 5. Both ratios are equal.

The teacher invited another group.

S2 (wrote on the board) No of copies: Cost of copies.
               1:5
               3: 15
               5: 25
S2: I multiplied 5 by 5 because the cost of one copy is Rs. 5.
T: All of you got 25.
S   (in chorus) Yes

The teacher then explained the textbook method and asked them to do the questions given in the textbook.

The above data excerpt shows that Abida encouraged the students to engage in dialogue with one another and with herself. She also encouraged and accepted students' ideas and sought elaboration of their responses. She recognized the students' potential and motivation

in the classroom when she encouraged their confidence by giving them an opportunity to express their ideas. In the post-observation conference, she said that before she began the textbook exercise, it was her intention to start with a problem situated in the students' daily life. She praised the students' participation in sharing their thinking about different ways of solving the question.:

> I had not expected the explanations they came up with. I was surprised when they solved the questions using the unitary method; I had not taught them this method previously (Abida's journal).

Abida maintained that her greatest achievement was the contribution of a student who participated in the class discussion for the first time. The student, S2, who offered the second solution, had never spoken in class previously and had failed in the examination for the past three years. She realized that when invited to contribute, the students had rich explanations to offer which demonstrated their active participation in the learning process.

Abida had previously observed the students' passive behavior in the mathematics classroom. She had assumed inferior capabilities of individuals' thinking because of her own learning experiences and limited goals for teaching mathematics. Her new beliefs about the students' learning with reasoning were not confirmed in the school reality until she observed the outcomes herself.

Samina was the other teacher to have introduced cooperative group work in her classroom. In a post-observation conference, Samina elaborated on the positive aspect of cooperative group work as follows:

> When I compared the students' existing learning about any topic with their previous learning, I found a clear difference. Now that they talked in small groups, they were learning with understanding, asking related questions to overcome their misconceptions. The students were now thinking deeply. For example, when I started the topic of circles in my class, after introducing the basic concepts about the parts of a circle, I started teaching them the method of solving word problems related to circles. These problems involved finding out the circumference when diameter and radius are given. When I wrote down the formula for finding the circumference of a circle many students asked me about "pi". Their questions were: Why is its value 3.142? Is it always constant? Does it

always remain the same? Even for bigger and smaller circles? These questions showed their desire to better understand the concept of pi. I then stopped explaining the textbook question on finding the circumference and decided to plan a lesson where students would be able to explore the relationship between the circumference and diameter of a circle, to find out the ratio between diameter and circumference (Quote from field notes of post-observation conference with Samina).

Teaching practice

Teaching practice in the classroom changed necessarily in the course of the programme. From analysis of classroom data it was evident that during their process of implementation, the teachers created situations in which the students worked in groups and were encouraged to bring out their informal and contextual experiences approaching questions through their own methods. All these methods centered on the students' active participation and involvement in their learning. As a result of these new experiences, the students demonstrated independence in their learning. For example, in the episode from Reshma's class that was shared above, there is evidence of a classroom discourse, which is richer in terms of the nature of students' interactions than what our earlier observations revealed.

Also apparent, was a positive change in the instructional sequence observed. For example, teachers traditionally begin to teach a mathematics concept by first defining it, and then explaining and exemplifying the definition. The textbooks are also usually based on this sequence (e.g. Shaikh, et al., 1998). Our initial observations of participants' classrooms also showed a similar sequence being followed generally. However, our later observations increasingly showed teachers first providing the students with a number of examples and non-examples of the concept.

Often providing opportunities for investigative work related to the concept and the concept definition was abstracted from those examples and investigations. For example, traditionally "kinds of quadrilaterals" are taught such that each quadrilateral is defined, its defining features listed followed by some practice work on identifying and constructing the quadrilaterals. However in Reshma's class, we observed that she asked students to explore quadrilaterals provided to them in the form of cardboard cutouts and identify the defining features of each. Similarly, Samina described in the quote shared earlier in this paper, how she changed her teaching plans for the topic of circles so that she could enable students to meaningfully learn the concept of "pi". Research (Skemp, 1986) has shown this new instructional sequence to be more effective in developing students'

conceptual understanding.

Emerging Issues and Questions

Certain issues and questions emerged in the course of the change being initiated in the classroom processes. For example, in some places, use of concrete material hindered students' ability to use the conventional notations and symbols for representing mathematics concepts. For example, Tehmina gave a handful of colourful buttons to small groups of students and asked them to make equal and equivalent sets with those buttons. Observations showed that when the class worked with colourful buttons, Mehvish, (a student), easily formed a variety of sets and correctly identified them as equivalent, equal and unequal sets. But in the final activity where Tehmina evaluated students' knowledge of equal and equivalent sets, Mehvish who had worked successfully with buttons, identifying, sets formed correctly as equal, or equivalent, identified the following two sets as equal

A= {b, o, y}

B= {boy}

Mathematically, the two sets above are not equal because set A has three members while set B has one member. The commas are meant to separate each member. However, it appears that Mehvish had not recognised the significance of commas in the formal notation. This could have been due to the fact that when making sets with concrete materials she did not need to put commas to separate the distinct members of the set. Hence, the very advantage in enabling students to move away from the formal symbolism of mathematics became an issue when students could not follow some of the conventions that are particular to symbolic mathematical language.

Similar issues also arose in Reshma's class. For example in one class, Reshma referred to the students' bag as a "universal set" and things present in it such as text books, registers, copies, pencils, pens, eraser, etc. representing different sets. When she asked the students to represent the universal set and other sets formed using formal mathematical notations,, a few students wrote "U = {bag} and set A = {pencil, eraser, pen}". However, this is mathematically not correct as 'a set containing all elements under consideration is called the universal set' therefore the "universal set" must contain all the things present in the bag including the bag itself for example U= {bag, pencil, pen, eraser, geometry box, pointer, textbook, register, copy}. It could be that the teacher was not secure in her knowledge of mathematics to be able to address emerging issues and so the learners also

faced difficulties in understanding the concept and were a bit confused.

Conclusion

To conclude, the findings from the study showed that the teaching strategies introduced as part of the Advanced Diploma Programme led to a positive change in the teachers' classroom practice, in the mathematics that the students learnt in the classroom and how they learnt it. However, the study also revealed that certain contextual and other factors mediated the potential of these strategies to impact the classroom. Primarily from the findings reported here, these factors include: teachers' subject matter knowledge, their experience and ability to handle student responses, their critical (as apposed to an unquestioning) use of the strategies introduced.

The study was looking at the ongoing impact studying the change process as it unfolded in the classroom. An implication of the action research was that the teachers' implementation of new strategies was not their blind acceptance of new ideas; on the contrary, it was a process of the teachers' questioning routine practice, analyzing new strategy and deciding appropriate actions in relation to adjusting change within their classroom realities and school circumstances. The teachers have moved from the passive role to the more active through participating in this process of research and reinforcement of their critical reflection. Consequently, the teachers' involvement in researching the implementation process had engaged them in an evolving and continuous process of self-reflection. This could be seen as an indicator of the teachers' maintaining their learning to routine life in schools.

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LEARNING TO TEACH SCIENCE USING A NEW STRATEGY: A CASE STUDY OF A PRIMARY SCIENCE TEACHER

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Abstract

Constructivism has emerged as the dominant learning model in science educational reform. Despite this, there is a paucity of research studies on instructional strategies that might help the construction of knowledge that is in consonance with the established body of science. The use of activities based on discrepant events in teaching science at the primary level is seen as one way of encouraging this construction. Hence, Science Teachers enrolled in science methods courses / programmes at AKU-IED are exposed to this instructional strategy.

The four-member team of science teacher educators, teaching on an eight-week in-service programme, chose to look at the experience of the participating science teachers critically as they were exposed to the use of this strategy for the first time. The purpose was to understand how the participants learn the strategy and use it in the primary classroom. Four independent case studies were generated -- this paper presents the case that I studied.

I worked with one female science teacher from a private school in Karachi. The teacher was observed, while this strategy was taught, as she planned the lesson using this strategy and while she delivered the lesson to class five students. She was also interviewed in-depth after the practice teaching. Data shows that the teacher succeeded in delivering the lesson as planned, however, she faced some unique challenges in planning and teaching. Despite, having strong content knowledge and confidence in her teaching ability, she faced difficulty in selecting the discrepant event suitable to the content of the lesson.

Analysis reveals that the discrepant event requires a special kind of "practical pedagogical knowledge" that requires both content knowledge and experience with hands-on activities. Observation also showed that, despite support, the teacher had difficulty in explaining the discrepancy in the event to the pupils. The pupils too, lacking a wider experience of life, had difficulty in seeing the discrepancy in the activity. Implications for teachers and

teacher educators are discussed, as follows:

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Constructivism, as a learning model, has found a great deal of acceptance in Science education (Baker, 1997; Collette & Chiapetta, 1989). There is a growing recognition that educators need a wider repertoire of strategies applicable to a constructivist classroom (Bonsetter, 1998; Gunstone, et al. 1999). One promising approach is through the use of so-called 'dissonant' or 'discrepant events' (Kavogli, 1992). Discrepancy refers to a dissonant situation where the outcome is contrary to what the learner expects. This results in arousal of conflict with a consequent need for the learner to assimilate the unknown or incongruous material into his or her cognitive structure. Perplexity and contradiction play an important role in stimulating the learner's curiosity This concept of discrepancy can be traced to the early work of Festinger and his Theory of Cognitive Dissonance in which he stated that the creation of dissonance is psychologically very uncomfortable and motivates individuals to actively reduce the level of dissonance and thereby return to a state of greater equilibrium or consonance. Current research in the area of conceptual change maintains that students' dissatisfaction with their existing conceptions constitutes a fundamental condition in bringing about meaningful cognitive change (Posner, et al. 1982). A change is necessary to change students' alternate frameworks and to help them to construct knowledge that is in line with the current scientific thinking.

Mustafa (1998) shares her experience of working with this strategy with middle school students in her school in Karachi, "I found discrepant events very useful and motivating strategy however, it was time consuming and difficult to implement. I had difficulty in developing events suited to the learning needs of the students." Despite the difficulty, Shakoor (1998), found discrepant events to be a viable strategy in the Science classroom in Pakistan. Shrigley (1987) finds that discrepant events fascinate children and could and should be used to teach inquiry-based science to children. Hence, this strategy is included in the repertoire of strategies introduced to teachers enrolled in the Certificate in Education (Science) offered at the Institute for Educational Development (AKU-IED). As a teacher educator and a teacher-researcher I am interested in professional development of teachers and the experiences that they undergo when exposed to a teaching strategy for the first time.

The Certificate in Education is an eight-week in-service program offered in five curriculum areas (Science, Mathematics, English, Social Studies and Primary Education), offered to teachers from AKU-IED Cooperating Schools. It might be worth mentioning here that

AKU-IED was established in July 1993 as an integral part of the Aga Khan University, with the purpose of serving the region[1]. The Institute's programmatic activities include a two-year Master of Education and in-service Certificate Programmes. The Certificate in Education (Science) has been offered almost every year to primary and secondary science teachers from all parts of Pakistan and the countries that AKU-IED serves[1]. This programme is taught by AKU-IED faculty along with graduates of the MEd programme.

This study was initiated to look critically at the experience of primary science teachers participating in the Certificate in Education Programme offered by AKU-IED. The research question under study was:

> What is the experience of primary science teachers when exposed to a new teaching strategy (discrepant event in this case) and the process that they follow in using the strategy in the classroom for the first time?

The four-member teaching team[2] undertook to develop four independent case studies under the leadership of the author. However, this paper presents one case that I studied and developed.

Methodology

The research participants were drawn from the twenty-two teachers taking part in the Certificate Programme (Science). These teachers could be categorized into four groups: teachers from the government schools, private schools, AKESP system in Pakistan and teachers from schools outside Pakistan[1]. One teacher representing each sector was selected to participate in the study. As mentioned above each member of the four-member teaching team took responsibility of developing a case. The criteria used to select the teachers were:

1. The teacher must have a science background, i.e., must have at least a BSc / Inter in Science or equivalent educational qualifications;
2. The teacher should be teaching science at the primary level;
3. The teacher should have at least three years experience of teaching;

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1 This includes Afghanistan, Bangladesh, India, Kenya, Kyrgyzstan, Pakistan, Tajikistan, Tanzania, Syria and Uganda.

2 I acknowledge the contribution of the Ms. Shahida Javed, Mr. Idrees Ahmed and Mr. Saeed Nasim who with me constituted the teaching team as well as the research team.

4. Should be doing well in the in-service programme.

The teachers participating in the study were treated no differently from other participants of the programme except that they sat for a 30-45 minute interview conducted after practice teaching.

The data collection was spread over a four-day period in which the primary teachers were exposed to the teaching of discrepant event for the first time. The schedule that was followed for teaching and research was as follows:

DAY 1: The four-member team taught a hands-on six-hour session on discrepant events. Besides their teaching responsibilities the research team[3] also observed their designated teacher as part of the research study.

DAY 2: The teachers prepared for and developed a lesson plan to teach a science lesson at the primary level using discrepant events as a teaching strategy. They also presented the prepared discrepant event to their peers to obtain feedback. The research team observed and took field notes about the participating teachers' preparation and planning for teaching.

DAY 3: The teachers taught the prepared lesson in a real classroom, while being observed by a member of the teaching team. They were then given feedback after the lesson. The research team maintained comprehensive field notes on the class observations.

DAY 4: The research team interviewed the participating teachers for 30-45 minutes.

The teaching format outlined above was generally followed by the teaching team throughout the programme. Farhana has summed it up in her interview[4] as such:

> You have a special way to move ahead, that I have been observing from the first day. Whenever we learn something new, first of all you people demonstrate it as a teaching strategy, which we have not studied before. We observe; then keeping our experience in mind, we plan something

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3 Please note that the four-member teaching team and the research team was the same, however they had different roles and functions to perform during the teaching/research period.

4 All quotes from the teacher's interview have been edited to enable the reader to better understand the meaning. In addition, at places Urdu words that she used in her conversation have been translated into English by the author. Journal entries are used verbatim.

ourselves. After that we present it to our peers which helps to build confidence. And finally, we implement the plan in a classroom.

Support and help was provided to the teachers throughout the planning and developing stage of their lesson plans. The whole lesson was observed by at least one member of the teaching team. Data for the study was collected in the form of field notes and reflective journal entries maintained by both the research team and the teacher. The teacher was also interviewed for a duration of 30-45 minutes, which was recorded on audiotape and transcribed.

Data analysis involved reading and coding the field notes along with reflective journal entries of the teacher and the researcher as well as the transcribed interviews. Comments, remarks and emerging categories were noted in the margin. Patterns and trends in these materials helped to identify relationships between variables and themes, whereas the isolation of patterns and processes and collapsing them in large categories enabled the findings to emerge (Strauss & Corbin, 1998).

Teaching and learning a new teaching strategy

Farhana Batool[5] is a bright and articulate science teacher working in a private school in Karachi, which I shall refer to as the Central Model School (CMS). She had recently shifted to Karachi from Islamabad and had begun to teach at CMS. It was a reflection of the confidence the school had in her ability to benefit from the in-service programme that she was sponsored to attend after teaching in the school for only four months. During the eight week in-service, she participated enthusiastically, asking questions and raising issues both during class and through her reflective journal. She had the ability to grasp new ideas relatively quickly and was a very conscientious teacher.

Farhana was not aware of discrepant events as a strategy for teaching science, and was curious as to its nature. Teachers were paired into groups of four when the actual subject was introduced in the programme. Farhana took a "lead" role, reading the instructions, translating them in Urdu for the members of the group who were not very conversant in English, and then following the instructions along with them.

Her first reaction to the use of discrepant events by the teaching team in the programme was expressed in the following dialogue from the interview transcript:

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5 A pseudonym has been used to protect the teacher's identity.

Farhana Batool (FB): On the first day when the activity started, one had the feeling that discrepant events were something else. That these activities would not be the same as those activities that we do daily. In the beginning we had a discussion, then one activity was done in front of us, we did an activity by ourselves also. Till that time it appeared that discrepant event activities were something else.

Nelofer Halai (NH): What does it mean when you say "something else"?

FB: It seemed to me that discrepant events were not normal activities.

NH: OK

FB: They are something special. They are something different where we would have to consult different books. In the beginning, it appeared that it was going to be a difficult task. When we started lesson planning, thought more, picked up and read more books, then it became clear that a discrepancy is present in almost all activities. The majority have themthough we don't think in that way. It has more to do with the way we think. Which direction are we going in? The most helpful were the suggestions we got to improve the discrepant event from our peers and tutors. For me, the most ideal time is that time.

NH: Your peers?

FB: When we were doing the presentations for other teachers, when we talk, the confusion automatically comes forward and we become more clear ourselves about the activity and where we should improve. That really helps us a lot. And we automatically become more confident. If things have worked here, then definitely they will work in the class.

The content atmospheric pressure and related concepts were to be taught using this strategy. A part of the morning's work included working on a pre-selected discrepant event based on some aspect of atmospheric pressure. Each group was to then present to the rest of the class both the activity as well as the science underpinning the activity.

Farhana's group was given an activity where they were supposed to put a lighted matchstick in a jam jar and put a hand on the jar in such a way as to make it airtight.

When the jar was released it was expected to remain sticking to the hand. Farhana tried it several times but could not do it. Then Farid, another teacher in her group, tried it and it worked very well. The jar remained stuck to his hand for quite some time leaving a dark red ring mark. He also said that he felt suction on his hand. However, all subsequent attempts to obtain the required suction failed and the jar did not "stick" to the hand. Farid and then Farhana both tried it together with a third teacher from the group, but it did not work. The jam jar refused to stay put and would not adhere to their hands as it had during the group work. However, they made the best of the situation and explained the activity to the rest of the teachers.

As a teacher-educator and teacher-researcher, these two things are a source of interest for me - the fact that the selected activity was very temperamental, sometimes it worked and sometimes it did not; and secondly, a very cursory attempt was made to explain the science behind the event. Perhaps in this case it was because the activity did not work so the teachers could not explain the science related to the discrepant event. In the same way other groups were expected to demonstrate their discrepant event activity to the rest of the class and teach the scientific concept underlying it. However, I saw that only one group took pains at trying to get at the underlying scientific concept.

At the end of the morning sessions, I was not sure how many teachers had understood the concept of atmospheric pressure from the demonstrations. In retrospect, I think we, the teaching team, should have encouraged and actively facilitated more discussion of the underlying science principles when we demonstrated discrepant events ourselves. Later we saw that the teachers too focused on making the activity work and less attention was paid to understanding or explaining the science underpinning the event. For instance, in the above example, the focus was on making the jar stick rather than on understanding and explaining to the peers the reason behind it and relating it to atmospheric pressure.

Learning to use a new teaching strategy

On the second day, the teachers were given time to look up resources in the library to prepare their lesson plan using a discrepant event. I was immediately surrounded by a group of students who wanted more specific help. I mentioned the name of Liem's (1987, 1991) book, *Invitation to Science Inquiry*, and the teachers were off chasing it. I saw Farhana and one of her colleagues in front of the photocopier in the afternoon. They were getting some activities copied. I asked them how they had located the activity. They told me that they looked for an activity that they could do easily and one for which the materials were easily accessible. They then looked in the textbook to see the absence

or presence of that topic and came up with an objective for the lesson.

In essence, the sequence was exactly the same as the one that we as the teaching team had followed in planning this session. Interestingly, it is also the exact opposite to what we profess to teach, i.e. make the objectives first and then develop the lesson. The teaching team had decided to address some biological content in the week in which a discrepant event was to be introduced.

However, very few discrepant events were found suitable for teaching Biology and even fewer resources were available to help develop discrepant events in Biology. Hence, it was decided to teach atmospheric pressure, as there was a lot of material available in this area. Does it mean that in some strategies like the discrepant event it is easier to first locate the activities and resources and then select the topic area? Is there any harm in following this practice?

Farhana's discrepant event

Farhana selected the activity for teaching based on a number of factors. She explained the selection process in this way:

> To plan the lesson I had to find the activity with the topic in mind. For that I had to go to the library and read trying to find different activities, reading them thoroughly and then thinking about them. Some of the activities that I read were very general which the children would already know. I dropped such activities. Some activities that I selected, on closer inspection, were not relevant. That is, I would not be able to draw a relation between the activity and the topic to be taught. Then there were some good activities but to explain them would require a high level of understanding in science and hence would be inappropriate for class four. I was also looking for those activities that needed material, which I could get myself. Neither did I want to borrow material from AKU-IED nor did I want to purchase them. So I had to keep the availability of material in mind too. Maybe the material I wanted to use were available at AKU-IED but not in my school so I wanted to develop an activity that I could easily support and recreate anywhere.

She had first selected another activity that she tried to prepare at home. However, despite repeated attempts she could not get the desired results. Hence, she prepared another

activity using discrepant events for the microteaching session. This activity worked well and Farhana used it to teach a science lesson to class four in the CMS for one period lasting one hour. This was the day that a political party had called a strike in Karachi and hence there were only thirty students in the class instead of the over forty to be expected. The topic was "hot air rises". The discrepant event she used in her teaching was as follows:

Take three bottles from which the bottom has been cut away.
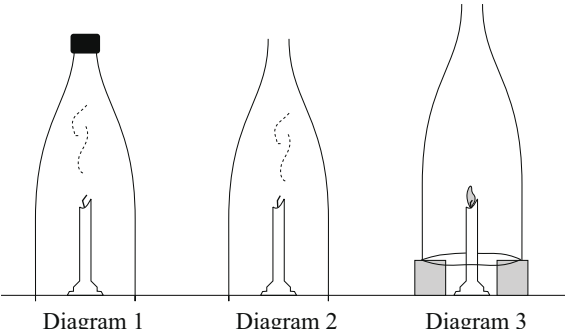
Diagram 1   Diagram 2   Diagram 3

First light a candle and cover it with the plastic bottle as shown in Diagram 1. Make sure that the top of the bottle is tightly closed with the cap. The candle will soon extinguish.

Light another candle and cover it with a bottle, as shown in Diagram 2, make sure that the cap is removed. Even now the candle will extinguish very soon, which comes as a surprise!

Light the third candle and cover it with the third bottle, as shown in Diagram 3. Make sure that the bottle is raised higher by placing it on small wooden pegs. The candle will continue to burn for a long time.

Her management of the class and the materials was excellent, though she faced some difficulty initially when all her students could not see the demonstration. The best part of the lesson was the manner in which she used the Predict Observe Explain (Gunstone, 1991) sequence of questioning to enhance student engagement and suspense. In her journal, she records that she could do better by devising a lesson where the students, in small groups, work on a discrepant event themselves. Her lesson also succeeded in achieving the goal of demonstrating to students that hot air rises, however, very little class time was devoted to why hot air rises.

My understanding of the process

On analysis, I think that Farhana went through at least three stages:

1. The Appreciation stage, which I call the Wow and Vow stage!
2. The Application stage, which I call the Muddling Through stage.
3. The Analysis stage, which I call the Second Thoughts stage.

The Wow and Vow stage is the initial euphoria where Farhana was delighted with the presentation made by the teaching team; she called it almost magical. She was fascinated by the activities presented, the manner in which it was presented to create inequilibrium in her mind and the way it was resolved by teaching the content. She also resolved to teach in a similar manner.

This stage of Muddling Through comes into play where a teacher like Farhana is given time to develop her own lesson plan using this strategy. There is almost a sense of panic and she, with her colleagues, is seen in the library and at the photocopier making copies of potentially suitable activities. Further support was sought by discussing the discrepant event with the teaching team. Farhana, was particularly keen to see that there was a good match between the discrepant event selected and her teaching goals.

During this stage, teachers like Farhana who have good English language skills, offer strong peer support. I often saw her surrounded by other teachers asking help in trying to understand some activity sheet that they had brought from the library. A number of teachers, both from the government and private sectors, had difficulty in comprehending either the directions for doing the activity or the science underlying the activity. Often times it was a little bit of both.

Slowly, most teachers settle down and start working on their selected discrepant event. During this stage, Farhana made two decisions that helped her to succeed: she decided on a topic and did not change it even if the activity that she had selected did not work; and she chose to select another activity covering the same topic rather than change the topic and activity. This is where a number of her colleagues had difficulty. As soon as an activity did not work, they panicked and chose another activity that they thought would work unmindful of the topic area. That meant that not only did they have to work on a new activity, they had to read up and understand a new topic area.

The most difficult part was yet to come, to actually try the discrepant event and make it work "the way it is supposed to work". Farhana, like many others had to change the discrepant events because she could not achieve the desired results. The Muddling Through stage, I believe, continued right through the teaching practice stage. I observed that the teachers were at different levels of comfort with working with this strategy.

There were some teachers who could barely understand the concept of discrepancy and had difficulty in seeing the discrepancy in most of the activities given in resource books. And there were teachers like Farhana who had written in their reflective journals that she wanted to not only demonstrate discrepant events but wanted to let students do these activities individually. Farhana was among the teachers who used discrepant events with relative success.

The last stage was where Farhana had second thoughts about her ability to engage and use this strategy in her own classroom. She writes in her journal:

> There is a question in my mind. Here at AKU-IED we have time, books and guidance of our facilitators to help us to plan and deliver an effective lesson. Is it really going to work when we go back to our own places? There we have a lot to do and in one day we have to take three or four lessons. I think we are really going to have a tough time. Although we did all the work individually today, we faced a tough time in preparing our lesson. A lot of practice will be required to overcome this problem.

During the interview when Farhana was asked the most essential and critical elements for using discrepancy in the primary classroom, she said:

> Content knowledge is the most essential aspect. Without having content knowledge, no matter which method we use, we definitely cannot ask questions with confidence. This is my own experience. If I have to ask questions, so that children are encouraged to ask more questions, then I will hesitate to go on a track where I am not sure of my own content knowledge. But when we are confident, we want the child to think more and ask more questions. Content knowledge is the basic requisite of good teaching.

I agree with Farhana that science content knowledge is the most important prerequisite to be able to teach effectively using this strategy. Very often primary teachers in Pakistan themselves have very little preparation in the science. Hence, they do not have exposure to either the science content or science activities that they can: (a) see a discrepant event and recognize a discrepancy; (b) explain the discrepancy based on science content knowledge. These two conditions help to make this strategy particularly challenging for primary science teachers.

Implications for teaching

The first stage of Wow and Vow is very important for motivation of the teachers, but it is the second stage of Muddling Through that defined success for Farhana. She needed the time and space to work on her activity and materials. However, support and pressure both are required at this stage -- if no support is provided at this stage, the teacher will soon become frustrated trying to do a task for which she is not well prepared.

However, if there was no pressure, it is possible that Farhana might have not been able to prepare another activity to replace the first one in such a short span of time. The pressure was provided in two ways: (a) by requiring the teachers to prepare a lesson to teach in a real classroom and (b) by expecting teachers to demonstrate a part of the lesson in front of their colleagues. Farhana felt that the latter aspect of the whole teaching sequence was most helpful in clarifying ideas, removing confusions and improving the lesson plan. There was a pressure to present something reasonable to one's peers in the given time.

The biggest challenge for teacher educators is to devise means where the teacher can undergo two or three cycles of the Muddling Through stage. Each iteration will help them to get closer to the stage, which Bonsetter (1998) calls Phase III. He states that teachers go through three phases as they try to implement reform in education:

Phase I: The pre-reform stage where the teacher is "doing what they have been doing".

Phase II: The teacher is exposed to a new way of doing something via a one-day workshop. S/he tries it out, it does not work and s/he concludes, "this stuff is just another short term educational trend". And they revert back to Phase I.

Phase III: The teachers do not stay long enough with the reform to reach Phase III where teachers reflect on what they are doing and how they might integrate these new ideas into their pre-workshop repertoire of teaching tools.

To keep the teachers engaged with a new strategy until they become comfortable using it is the challenge that is facing teacher educators at AKU-IED too. One of the reasons that the Certificate in Education has transformed into a more field-based format is to extend and lengthen Phase II and support the Muddling Through process so that the teachers reach Phase III.

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LEARNING RESOURCE CENTRE:
A VEHICLE OF TEACHERS' EMPOWERMENT

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Abstract

After having completed our Masters in Teacher Education, our sponsoring NGO Faran Educational Society (FES) welcomed us as Professional Development Teachers (PDT).

We were quite eager and anxious to put the theories in practice and to initiate professional development programmes in order to build the capacity of FES networking schoolteachers.

We joined FES in August 2002. In the beginning, we both were quite worried because on one hand our stakeholders had enormously high expectations from us, and on the other hand our contemporary colleagues were not willing to let us intervene and bring about any change in the situation that existed. As professional development teachers, we knew that we would not be able to tackle the situation we encountered at various tasks. Therefore, despite all our enthusiasm, we kept our emotions under control and negotiated with our Programme Manager (PM) and Chief Executive Officer (CEO) regarding our role at the Society as PDTs. At the same time, we observed things critically to decide what our starting point should be.

We were already aware of the fact that the AKU-IED had established LRCs in various NGOs under the USAID Project III. Similarly, there were two LRCs established at our NGO as well in October 2001. However, it came to our notice that no remarkable progress or work was done till then.

Although the core team was established, which consisted of Visiting Teacher, Certificate in Education Management and Advanced Diploma in Primary Education graduates, they could not activate LRC and there was not enough support from the Society for them. Therefore, we negotiated with our PM and CEO and started our first and foremost initiatives from LRC, with all the AKU-IED graduates who were looking forward to putting their learning into practice in order to build the capacity of other cluster schoolteachers. Undoubtedly, LRC was the right place to start and this was also

acknowledged later by various stakeholders of our Society.

We had several meetings with our colleagues and found them full of enthusiasm for starting professional development activities. With two months' efforts, we were in a position to run LRC. In December 2002, LRC lunched its first 96-hour course with the title of Certificate in Primary Education (CIPE). We played the leadership role with four VTs, one CEM graduate and two ADIPE course participants (CPs). At the beginning, we facilitated them to design and plan the course, write the programme book and conduct the sessions. During the whole process we provided them with constructive feedback and need-based necessary support.

Initially, due to lack of exposure, they were a little nervous about taking the lead role in conducting the sessions. In order to boost the level of their confidence and their capacity to conduct teacher education workshops, we took the leading role and conducted some initial sessions, however, we accompanied them with us as team members and co-facilitators. For example, in first session, we led 80% of the session, but as the course moved forward, slowly we removed the scaffolding and our colleagues became confident, and finally started leading the sessions.

 It was observed that after a few sessions, our LRC core team members became confident. They started to chalk out their own sessions and invited us as well as other colleagues for critical feedback. This shows the enhancement in their capacity-building as teacher educators. This is one of the indicators of the difference our interventions made.

In addition to above-mentioned impact on the LRC, there were a few more. For instance, it occurred to us that our core team members had started to feel the thrust of professional development. The most important thing that we observed was that their classroom teaching had dynamically improved.

The course participants who attended the course demanded for more courses for their professional development. The school administrators, who sent their teachers for the first course with some reluctance and disagreement, are now ready to send their other novice.

Introduction

The Faran Educational Society (FES) was established in 1975 as a voluntary civil society

organization with nation-building as its prime objective. This was to be achieved by setting the standards in education and making people aware of its importance. Other aspects that would strongly support a venture such as this were socio-economic interventions, efforts in re-establishing and upholding a true form of democracy further leading to a genuine change in the nation's policy, behavior and practices.

Through education and development, the organization strives to bring about positive alterations in the Pakistani civic society, such as the inculcation of basic human values and respect towards life. The FES board is a fine composition of community and corporate sector representatives. The FES has within its fold, a network of more than 100 schools and an academy that comprises well over 50 AKU-IED graduates. FES established a partnership with AKU-IED in 1999. Faran Academy is head by three main people, namely, Mr. Nesar Ahmed program manager, Mr. Muhammad Yusuf, (PDT) and Syed Tahir Hussain (PDT).

LRC introduction

The term "professional development" is the most attractive issue and the center of attention nowadays Craft (2000). Teachers' professional development programs are conducted in an environment where the process of learning takes on various forms, all of which aim at a long lasting qualitative change in teachers' approach toward educating themselves. One such form of creating opportunities for professional development is the establishment of Learning Resource Centers (LRC). The rationale of an LRC is to provide teachers with a platform upon which they can practice learning and implementing in their own context. In many schools and institutions, professional development has become a popular means to progress, which statement is congruent to the views presented by Thomas.

According to Thomas (1995), professional development is understood almost exclusively in terms of formal educational activities, such as short courses or workshops. Several times a year, school administrators release their teachers for a half or full day and hold an "in-service" program that may or may not be relevant to teachers' professional development needs. These programs may feature experts who speak to teachers on a "hot" topic or they may consist of a number of simultaneous workshops offered by "trainers" who are recruited from other reputable institutes or the university, or from the education department.

The LRC at Faran Educational Society (FES) was established last year as a outcome of

a collaborative partnership founded between AKU-IED and Faran Educational Society in the year 2001. The purpose of the LRC was to augment the capacity of school teacher clusters and provide a channel to AKU-IED graduates and course participants through which they could partake in professional development activities. In addition to that, the LRC is a crossroad where teachers and school leadership interact, share their ideas contribute to the community and accelerate educational and vocational development activities.

The LRC's objectives

- Develop and provide need-based training programmes to cluster teachers, (head teacher, social activist, youth and community);
- Enhance teachers' pedagogical content knowledge ;
- Enable teachers to develop low/no cost materials and to use them effectively;
- Explore partnerships between schools, communities, other NGOs and stakeholders;
- Organize need-based workshops;
- Conduct small-scale research work;
- Organize women development activities such as vocational training among others;
- Develop networking with organizations and human resources;
- Develop a content-based curriculum according to the need of the context;
- Promote adult literacy programs

Strength

At the FES, the LRC has easy access to the human resource developed at AKU-IED. These include VTs, CEMs, ADIPEs and M.Eds. These graduates provide us the diversity in catering to teachers' needs keeping in mind their situations. In addition, AKU-IED's, technical support is always available, rendering LRC activities sustainable.

Furthermore, there are two PDTs with work experience gained at AKU-IED in the USAID Project. Another factor that keeps us strong in our efforts is the trust we have earned through our programs. Many teachers and clusters of various school management bodies feel that the FES professional development programs are reliable. Last but not least, FES has a strong network with cluster schools.

Proposed professional development program

- Certificate in Primary Education (CIPE)

- English Language Enrichment and Methodology Course (ELEMC)
- Certificate in Early Childhood Education (CECE)
- Certificate in Educational Leadership and Management (CELM)
- Need-based Short Course

Major activities / programs

- Library facilities for teachers
- Needs-based workshops and teacher education programs for teachers and head teachers.
- Community meetings and social mobilization
- Linkage between schools and the NGOs
- Literacy programme
- Computer education
- Curriculum development
- Needs-based learning material development
- Vocational training courses

Beneficiaries

- Generally all teachers in the region; cluster schoolteachers and head teachers in particular.
- Students
- Schools that rely on networking
- Youth
- Women

The PDTs' come back

After having completed our masters in teacher education the NGO, FES, welcomed us as Professional Development Teachers (PDTs).

We were quite eager to put our theory into practice and to initiate professional development programs in order to build the capacity of FES networking schoolteachers. We joined FES in August 2002. In the beginning we both were quite worried because on one hand, our stakeholders pinned high hopes on us while our contemporaries were not too open to the idea of letting us intervene to bring a positive change in the prevailing situation. As professional development teachers, we knew that we would not be able to tackle the

situation if we encountered problems at every step. We kept our initial enthusiasm to ourselves and decided meet with our program manager (PM) and Chief Executive Officer (CEO) concerning our role at the society as PDTs. Simultaneously, we tried to analyze what our starting point ought to be.

PDTs' role in activating the LRC

We were already aware of the fact that AKU-IED had established LRCs at various NGOs under the USAID Project III. Similarly, there were two LRCs established at our NGO in October 2001. However, it came to our notice that no remarkable progress had been made beyond the setup.

Although the core team of VT, CEM and ADIPE graduates was assembled, they were a little hesitant in taking the initiative in setting a certain direction to LRC activities. In addition, there was not enough support from the society's end. Therefore we negotiated with our PM and CEO, and took our first and foremost initiatives from the LRC with AKU-IED graduates looking forward to executing what they had learnt to build the capacity of other cluster schoolteachers. The fact that the LRC was the right place to start was acknowledged later by various stakeholders of our society.

Several meetings between us and our colleagues were held and it was pleasing to know that they were very eager to have professional development activities started off. Within two months, the efforts put in enabled us to run a full-fledged program at the LRC. In December 2002, LRC launched its first 96-hour course under the title 'Certificate in Primary Education' (CIPE). We led a team of four VTs, one CEM graduate and two ADIPE course participants (CPs).

Collaboration with cluster schools

In order to create awareness about the cluster schools' heads and teachers, the concept of LRC and its significance, we organized a meeting with the heads. It was a little challenging to enroll novice teachers for the LRC first professional development course. This is why we initially invited the school managers and head teachers to the LRC and shared the concept of LRC along with the course outline of "Certificate in Primary Education (CIPE)."

In the first course, 20 teachers from 10 schools participated. We enrolled two teachers from each school. This was done so that each pair of teachers could support each other

in implementing and reflecting their learning. As Lieberman (1994) defines the professional development of teachers as a foundation for the establishment of a supportive culture involving norms of collegiality, where teachers update themselves with new content within their scope of work. Professional development activities that introduce a collaborative culture and collegiality among teachers can immensely assist them in overcoming shyness and having it replaced with new found confidence. Thus professional development for teachers is an indispensable process that leads to a collegial, collaborative and cooperative culture among in the school, which in turn, accelerates the learning on the student level. In addition to that, professional development must engage each teacher in a collegial and collaborative dialogue with other teachers and education partners to broaden their knowledge and expertise that needs to guide the students toward the successful accomplishment and mastery of the curriculum content.

Being a non-funded project, all the trainers/facilitators worked on it as volunteers. For handouts, we charged course participants nominal amounts. The interactive sessions were conducted every fortnight on Saturdays. In order to run the course effectively and maintain quality, we conducted meetings with the team's subject specialist every Thursday evening to review and reinforce the next plan.

PDTs interventions

At the outset, ours was the leading role, which entailed designing, planning, writing the program book and conducting course sessions. During the whole process we were assisted team by members and during debriefing sessions we encouraged them to furnish us with substantial feedback. We also urged them to provide their input during sessions.

Initially, they were a little nervous in taking on the lead role to conduct the sessions mainly due to lack of exposure. To boost their confidence levels and their capacity to conduct teacher education workshops, we conducted the initial sessions and had them accompany us as team members and co-facilitators. For example, in some of these initial sessions, we led 80% of each session, but as the course moved forward, slowly and gradually we removed the scaffolding and our colleagues became confident and finally started leading the sessions.

Impacts of the interventions

The continuous support that our core team members had from us, developed in them increased levels of confidence. They started taking an active interest in taking on the

leading role. They chalked out their own sessions and invited us along with other colleagues for the purpose of critical feedback. Slowly and gradually they improved upon their methodology, which indicated an enhancement in their capacity building as teachers and educators.

Furthermore, they were more than ready to participate in professional development programs that were offered at or through FES.

A healthy competitive environment now prevails at the FES LRCs. It was observed that their teaching methods improved dynamically. This was stated by one of the core team members, "Now when I go to class, I want to do something new, something better and my students don't want me to leave." More evidence reveals a gradual difference was marked in their classroom practice before and after the LRC activities. The results are simply incredible.

The course participants who attended the course demanded for more courses for their professional development. In the course evaluation forms, we received feedback that the CPs would be willing to attend if more courses. The school administrators who sent their teachers for the first course with some reluctance and disagreement were now ready to send their other novice teachers to attend professional development courses at LRC.

Accomplishments

- 20 teachers from 10 schools benefited from the Certificate in Primary Education. 40 teachers of 16 different schools are middle of completing their course. 16 VT and CEM graduates of AKU-IED got the opportunity to share their learning and enhance their capacity as course facilitators on the LRC platform. Since the establishment of LRC, teachers and head teachers alike have been seen enthusiastically taking part in LRC activities.
- As a result, head teachers were highly motivated and saw the program as a requirement in this day and age. One of the head teachers quoted, "Such courses help teachers to become professional. Students have begun to take an active interest in class now. Please continue your efforts in this direction our sake."
- A teacher who is partaking in the program reflected, "Now, our class students enjoy while engaged in different activities, which motivates me to come to LRC to learn and prepare more learning material for my students."
- Professional development activities at LRC were given continuous monitoring support from AKU-IED and the feedback provided helped us set down important guidelines.

Challenges faced

- Logistic support has always been a challenge in working at the grass root level such as furniture, computers and electricity etc.
- The biggest challenge we faced at our NGO was managing the LRC activities.

Our NGO does not have the financial budget required to facilitate course participants. Our colleagues with us worked on these training workshops and programs as volunteers. Sometimes even the material and photocopies had to be bought from our own resources. Another challenge was to gather teachers for these workshops. In spite of the teachers' and head teachers' whole-hearted willingness to take part in the training program, time allocation was a major challenge. In our area, most of the schools are run 6-days a week. In addition to this, most of the schools have two shifts and a lot of the teachers work in both the shifts so choosing a suitable time when teachers could come was a problem.

Since most of our students did not have command over the English language, finding suitable material was a problem so we either had to translate or look for content in Urdu. There were some challenges even with our own colleagues because all of them work at different schools and for planning and material development and the execution was a challenge. Because their major responsibility is to the work at their own schools, their management did not want to leave them for these extra courses.

Recommendations

- Core team members should be provided with a forum for the purpose of further professional development. AKU-IED should continue to support NGOs so that LRC's may function smoothly. The constructive and continuous feedback helps professionals grow and also imparts a sense of attachment with the parent organization.
- There should be more LRCs at grass root level schools so that the ones who receive professional development education can practice in their own contexts with out any hesitation fearlessly for dual effect. Both the novice and the newly trained professionals can benefit.

Nature of support required from AKU-IED

From AKU-IED, we expect the provision of technical and material support. In addition, we should be provided opportunities for further capacity building of professionals.

Nature of support required from donors

Donors are always indispensable for programmes of this kind. If consistent financial and logistic support is available to the LRC programmes, they can run effectively and smoothly.

Opportunities

- Strong links with many organizations and professionals
- Training programmess are marketable
- University and any training organizations can be established

Conclusions

- Teachers' professional development is a continuous, ongoing, lifelong process. It is not an "in-one-go activity". These kinds of professional development programs can only be sustained if there is a continuous support.
- Teachers in under privileged areas would like to grow through their professional development; however there are certain constraints and challenges. If these challenges are met effectively, the growth in teachers' professional development can be upheld.
- LRCs can be a vehicle for teachers' professional development; however without proper support from the stakeholders this wonderful opportunity may loose its strength.

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A CRAWLING BABY BECOMES AN INTERDEPENDENT PERSON

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Abstract

The paper first provides a scenario of the teachers' professional growth at the Ismailia Youth Services (IYS) Schools, before the establishment of AKU-IED. The second part of the paper will provide a clear picture of the impact of Professional Development Teachers (PDTs) on the teachers' professional growth at the IYS Schools. And the third part of the paper will reflect the impact of teachers' professional growth on students' learning outcome.

Before the establishment of AKU-IED, the IYS Schools created different resources to upgrade the teachers, using different pedagogical knowledge and content knowledge. But none of these these efforts proved fruitful. To put it in another way, the IYS Schools had sown a plant, taken a lot of care of it, provided water in the presence of sunlight and carbon dioxide; and though the plant survived and stablized it was unable to produce flowers. Meaning, it could not become independent.

The IYS Schools did not get any real satisfaction from their invested efforts and seemed to sense that something was missing.After establishing an affiliation with the AKU-IED in 1994, the IYS Schools have now became a big tree having their own strong roots with stems having branches for providing shade, shelter and flowers bearing fruits. In 1995, when the first PDT graduated, she adapted the philosophy of "think big and start small".

This paper specifically highlights the changes that took place in the school culture, curriculum, and teachers' pedagogical content knowledge due to the continuous guidance and support from the PDTs through a follow-up process and a close monitoring system.

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Since 1995, the IYS Schools have developed four phases of change process. Phase one, which was implemented in 1995 was called the "Team Teaching / Peer Teaching"; Phase

two, implemented in 1996, was "Working in Pools"; Phase three was called "Guiding and Counseling" and was implemented in 1998, from which the second PDT graduated in 1998. The Fourth and final Phase began in 2002, and was called "Networking and Child Focus", from which the third PDT graduated in 2002.

Two more PDTs will have graduated in 2003 and they will provide support to upgrade the school to the Cambridge System. All of the phases have been developed based on the concerns and challenges faced in each of their preceding phases.

The "Working in Pools" phase is a very important phase for the teacher's professional growth. The rational of the pool system is to provide a common platform for all teachers of the IYS Schools for creating a supportive and conducive learning environment. It is a systematic and mechanized way of providing teachers with professional growth in all disciplines. In respective pools, teachers gather with their problems, concerns and share them with the PDTs and get alternative teaching techniques to overcome the challenges.

Introduction

The paper provides a clear picture about the background of the school, the scenario of Professional Development programme before AKU-IED intervention and also illuminates AKU-IED'S impact on the IYS schools of PDTs and other trained teachers such as VTS, SSTs, ADIPE, ADELT & ADISM, through teachers' professional development.

Back ground of Ismailia Youth Services Schools

The school belongs to a registered child welfare organization committed to providing social, cultural and educational uplift to children, many of who are orphaned or from broken homes. Day scholars are also at the school. The school comprises of three campuses (eight schools) for boys, girls and mixed gender schools with separates administrative units divided in pre-primary, primers and secondary levels. All the schools were nationalized in 1972 and then denationalized in 1985.

IYS Schools before AKU-IED's intervention (before 1995)

The Mission statement emphasis mainly three things:

(1) To up grade and enhance Teachers' professional development,
(2) Focus on the child's holistic development, and

(3) Dissemination of knowledge and learning experiences by creating linkages with other institutions /organizations / school systems to see their strength and areas for further improvement.

Teacher professional development programs were started in 1985 just after the denationalization of IYS Schools. Teachers were sent to different training institutions such as TRC, AKES, British Council, SPELT etc. Initially the focus of the school development programs was the "Teacher" with the underlying belief that "until and unless teachers are equipped with adequate content knowledge and pedagogical expertise, quality of education cannot improve." A strategy used to train teachers was to involve them in professional development activities, akin to workshops, during the annual vacation. Various local teacher-training agencies were used and speakers were invited to conduct workshops. A further strategy to improve education was an English language improvement program organized for teachers. However, the English language improvement program was not sustained, as teachers didn't perceive its relevance to their teaching and the workshops were considered an extra burden.

But the IYS schools could not achieve the targeted results by mere focusing on teachers' professional development programme, due to different reasons:

- The teachers considered teaching as the transmission of information to students. Teachers, relying on the textbooks, normally give lectures to students who are expected to memorize them with little or no attention given to understanding content. Thus teachers became textbook dependent and concentrated on completing the syllabus only.
- There was a balkanized system for teachers' professional development. Each of the eight schools worked in isolation and the head reported directly to the school management committee.

IYS schools after the intervention of AKU-IED (after 1995)

The IYS stake holders believe that "Good teacher education leads to good teaching, which in turn leads to good learning."

Upon the return of the first PDT in 1995, the school reviewed its school development policy. The new policy affected the administrative structure role and the status of the PDT. A school-based Teachers Professional Development Programme was initiated, which was to be led by the PDT with oversight from the principal.

After the affiliation with AKU-IED, 96% of the teachers were trained by 2002 through various programs. Fortunately, the IYS School system was able to plan, organize and conduct different training programmes according to the need of all IYS School teachers with the help of PDTs, SSTs and VTs.

Since 1995, three evolving models of Teachers Professional Development and one Child Focus Model were initiated on the basis of the need of the times.

First phase: Team / peer teaching (1995)

The first phase, which was introduced in August 1995, was a team teaching / peer teaching model. In this model PDTs, VTs and non-VTs worked together, cooperatively in side and outside the classroom. Pre-conferences, observation and post-conferences were arranged in a very systematic way. Teachers also observed each others classes and gave constructive feedback for further improvement. Methods of teaching were shifted from teacher-centered to child-centeredand an informal evaluation was introduced along with the formal evaluation.

Second phase: Working in pools (1997)

The second phase, which was introduced in April 1997, involved working in pools and many wondered why the second phase was even initiated. From August 1995 to March 1997, it was observed that the teachers who were not involved in the second phase felt neglected from the school improvement process. One of the Urdu language teachers reflected, "AKU-IED conducted VT programs, workshops and seminars for English, Science, Math and Social Studies teachers. The school also organized workshops for the same subject areas. How will Urdu, Islamiat and other subjects teachers learn new techniques?"

Thus a system of "Pools" was created with pool heads initiating changes for those who could not access the AKU-IED training programme, that is Urdu, Sindhi, Islamiat teachers, for which AKU-IED doesn't have any provision). Pool heads are free to identify their teachers' need through different sources and communicate to school heads and PDTs for further professional enhancement. Teachers can communicate their needs to their respective pool heads too.

Third Phase: Research & evaluation (1998)

The third Phase of Research and Evaluation was initiated in August 1998. Three years after the AKU-IED intervention, more then 60% of the teachers had been trained in the VT programme and a second PDT graduated from the MEd Programme. But changes have not come without frustrations, especially concerning students' exam results. Student exam results have actually lowered since the start of the change process. The obvious consensus arising is that there must be a match between the teaching and learning approaches in the school with the assessment process (paper pencil test). The school has begun more effective and relevant testing during home exams however the national examination continues to cause great consternation to those leading the change.

But what were the reasons of declining exam results? The PDTs were assigned the job to get the answer through studying the proposed "Fourth Phase of Change Process."

In 2002, the third PDT joined the school, thus allowing the IYS Schools to achieve their targeted goals related to Teachers' Professional Development. But most of the stakeholders felt that the second part of the mission statement, which relates to the child's holistic development, had not been according to expectations, neither up to the expected level.

Fourth Phase: Child-focused model (2002)

In April 2002, the fourth phase was introduced, which is Child-Focused and is a networking model. The main focus of the model was the child's overall development, which is reflected in the second part of the mission statement.

The objectives of the model are:

- To empower individuals in the Teaching and Learning Process to make it more Liberal / Innovative / Collegial
- To make the Teaching Learning Approach heterogeneous instead of homogenous at classroom level, exploring the special needs of individual child for proper guidance
- To share and contribute the resources with other organizations / schools / individuals to upgrade and update the Teaching and Learning Process
- To see our own strengths and weaknesses
- To observe each context only for learning purposes and try to explore why some innovations are workable in one context and not in another.
- To organize joint professional development activities according to the need of the

context

- To develop capacity-building and produce self-sustainability within the context

Networking is an umbrella term and its focus is multi-purpose. For achieving the shared objectives, teachers of the IYS schools used three main approaches as a vehicle for implementation. For example:

1. Heterogeneous Approach of Teaching and Learning
2. Liberal Approach of Teaching and Learning
3. Teachers' Guidance Approach

Heterogeneous approach to teaching and learning

Heterogeneous means different where every child is different according to their learning needs and individual differences are always found among children. So teachers should guide and support the child during his or her learning process while considering the special needs by using variety of teaching strategies.

Heterogeneous approach of teaching and learning comprises the following main steps, and every child went through the experiences of the following steps:

- Scaffolding
- Sensitization
- Cooperation
- Evaluation

Scaffolding

In this step, the teacher provides all types of guidance and support initially to adjust the child in the learning environment. For example academic, social and moral support will be provided to make their learning process more comfortable.

Sensitization

After going through the experience of Scaffolding, the child then experiences Sensitization. Here, the child does not believe only one theory of learning, he / she experiences all types of learning.

The step is also called the Exploration and Enhancement step because teachers diagnose the child's hidden qualities and skills and then provide different learning opportunities to develop them to enhance those skills.

Cooperation

During Sensitization step, teachers are made aware of the child's problems and concerns then they modify their style of teaching by considering the special needs and individual differences of the child.

Evaluation

Although there is an ongoing assessment throughout the entire process, a final evaluation of the child's progress in different areas is made at the very end.

Liberal approach to teaching and learning

The second approach of the Child-Focused Model is the Liberal Approach of Teaching and Learning. Working with the heterogeneous approach, it is necessary to empower each individual in the teaching and learning process, which needs a liberal type of institution, which must provide an opportunity to re-conceptualize teachers' beliefs about teaching and learning which must be interactive and with intrinsic motivation.

Student performance sheets are introduced at the classroom level to identify the special needs of individual children, which are maintained and recorded by the teachers and pool heads to highlight the identifying weak areas of each child. During the whole year, school heads and PDTs monitor the proper working of the performance sheets.

Teachers' guidance approach

The main rationale behind the "Networking Model" is to broaden the horizon of both the teacher and the institution because no institution is sufficient in itself to overcome all the childrens' concerns and training needs of teachers. That is why the IYS System believes in the philosophy of "Giving and Receiving". The IYS System will be "SHARING" in the following aspects:

- Resources sharing (Physical & Human resources) with different organizations i.e. IED, TRC, SPELT, British Council, AKES System etc.

- Inviting some freelancing educationists and other schools for organizing joint professional development activities according to the need of the context.

Conducting and participating in Teacher Training Programs and research activities involving the IYS School Improvement Center, AKU-IED, SPELT, British Council, SPDC and other schools, both AKES Government and Private.

Evidence related to the successes and challenges after implementing the ChildFocused Approach are:

1. Parental Involvement
   One of the parents reflected that:
   It is good that you have arranged a parent - teacher meeting at the beginning of the session to share the areas for special attention. Now we are well aware about where the children are lacking and we can guide them to improve those areas and to interact with teachers from time to time.
2. More focused on below average students
3. Upgradation of exam result
4. Follow-up of learning outcome

Concerns

1. Record keeping maximizes teachers' burden (SPS & target sheets)
2. Time consuming approach
3. Difficult to deal with individual differences
4. Changing parents perception is difficult

Main successes of AKU-IED

- The school developed a mass of professionally developed teachers who viewed their teaching practices critically.
- The establishment of school owned, planned, and conducted school-based in-service programmes aimed at the development of all teachers, in collaboration with the AKU-IED.
- The availability of in-house Professional Development Teachers who have teacher education expertise.
- The establishment of a mutually beneficial relationship with AKU-IED whereby the school engages in the research and development of its school improvement model.

- Teachers are acknowledged for their improvement efforts in monetary terms thereby increasing the value attached to in-service training
- Creation of a collegial teacher culture in which all teachers are involved through systematic and rational processes.
- Teachers demanding their share of the available professional support rather than the professional development being thrust upon them
- Over a period of 10 years, the school's culture has evolved from being isolationist to more a collaborative one.
- Students showed greater enthusiasm for the new approaches to teaching and learning. One teacher commented how she was being forced to go to the library regularly and learn 'new things because the children's questions were so good.
- The change process has not been smooth, neither has the support of all the teachers been consistent, yet significant outcomes are evident. The most significant outcome has been the impact on students learning. Teachers, heads, and the principal all agree that students demonstrate much more confidence, have improved their information processing skills resulting in asking 'better', more incisive questions, improved their communication and presentation skills, which are indicative of higher order thinking.

Challenges that still confront the school

- Each class has a wide variety of abilities and children are drawn from difficult home backgrounds. Teachers continue to face the challenges in providing individual attention and equal learning opportunities for all students.
- The workload facing the PDTs, pool heads and teachers is quite heavy and has impinged on non-school and personal time.
- Special concern on student's exam results.
- The obvious consensus arising is that there must be a match between the teaching and learning approaches in the school with the assessment process (paper-pencil test). More effective and relevant testing during term time. However, national examinations still cause great consternation to those leading the change.
- When teachers reflected on the issues and concerns that arose from their participation in professional development, their main concern was that the new teaching and learning methods take too much time and were still too concerned with covering the syllabus as the examination system still had not changed, despite being a provincial requirement.

A STUDY ON THE IMPACT OF ADULT LITERACY AND COACHING CENTERS

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Abstract

This paper discusses the impact of the educational interventions (the Adult Literacy Centers (ALCs) established by The Aga Khan Rural Support Programme (AKRSP) and Coaching Centers (CCs) run by the Aga Khan Education Service (AKES,P) in the Northern Areas of Pakistan in the regions of Baltistan and Nagar. The communities of both these regions have been reluctant to mobilize women for education. The centers were opened in order to change this perception, as well as to create an environment in which females could contribute to the overall development of these communities. More than 200 ALCs and 39 coaching centers are functioning in the above-mentioned two regions.

Two studies (Baig, S., 2001, & Baig, F., 2001) have been carried out which explore the need for non-formal education in those areas, set out the practical results of the interventions to date, and make recommendations for the future. This paper is written against the backdrop of those studies and in the light of a recent study conducted in February 2003.

Methodology

Individual interviews, focus group discussions, participant observation and document analysis was used to explore the realities, and the findings were triangulated. The study participants were the teachers of both the Adult Literacy and Coaching Centers, graduates of the centers, members of village education committees, and community leaders. Three kinds of questions such as open-ended, probing and close-ended were asked to obtain maximum data. (See Annexure). Field notes, including a reflective journal and a tape recorder were used as tools for data collection.

Data analysis is indeed a complex process which needs a lot of struggle and hard work.

According to Marshall and Rossman (1995, p. 95) "data analysis is a messy, ambiguous, time consuming, creative and fascinating process". However, we applied the inductive method to draw appropriate conclusions by playing with the data purely collected from the individual informants, focus group and observants. For this, we sought guidance from Patton (1990) who elaborates "inductive analysis means that the patterns, themes and categories of analysis come from the data. They emerge out of data rather than being imposed on them prior to data collection and analysis".

The analysis process was developed by reading all the responses of individuals, focus group participants and notes taken during observations. These were coded, and a search was made for the repeated and common points. Thus, common themes and sub-themes emerged progressively with the analysis and review of the whole data.

Theoretical background

According to the culture of the Northern Areas of Pakistan, community leaders make most of the decisions regarding any planned project but the decisions, particularly those related to women, do not work well without close consultation with the village population at large, especially the family members of the intended participants. Wolfendale (1991 p. 7) recognizes the imperative of obtaining the consent of communities before establishing any project:

> The involvement provides for parents themselves to learn, to grow, to explore possibilities, to become familiar with organizations such as schools and local educational authorities…consultation with and involvement of parents in discussions and planning of school policies and discipline and behaviors management constitute preventive measures of a positive nature (p. 45).

She further suggests that involvement of parents should include decision-making, and not simply information-giving: all parents have a right to be involved, and to contribute to projects of the school (pp. 7-8). Likewise, Anne Sharrock (1997) says that home and school are probably the two social institutions which have the most far-reaching influence on our lives if we think in terms of their joint effect. It is educationally and philosophically desirable for the child's home and school environment not to operate in isolation (pp. 9-10).

From our experience, we have learnt that active involvement not only of parents but of

all the stakeholders such as head teachers, teachers, students and other members of a community can certainly make a school and centers improve holistically. In this respect, Pamela Munn (1993) argues that without doubt, teachers, parents and pupils should work together in a spirit of practical partnership; then, not only do pupils gain in obvious ways, but there are also benefits of achievements and relationships that are both lasting and developmental (p. 104).

In many regions of the Northern Areas women's literacy is not considered important as women are largely confined to their homes. In this connection Taylor, quoted by Weiler (2001, p. 77) says, "women's literacy is devalued because it belongs to the home, to the care of children and to the maintenance of private life". Likewise, Mghadam argues, "for men, education must ensure continuity with progress without disrupting the status quo… because the political and social status of women is secondary to that of men in most societies. Proposing an improvement in their status could similarly be viewed as a threat to the status quo" (1992, p. 244)

Regarding the importance of female education, Robinson-Pant (2002, p. 359), referred to by Safiullah Baig, writes that education provides girls with an opportunity and skill to maintain communication with their parents, particularly in times of crisis[1]. Additionally, it seems that reading and writing might provide a private space for women to reflect on their experience. In support of this, Chambers (1992) maintains that perhaps for uneducated women, education provides an alternative, a reversal of the traditional women's role away from normal practice and towards its opposite. All these ideas and insights broadened our thinking and guided us to consider various factors while carrying out the study.

Findings

The study revealed two major themes: the quantitative and qualitative impact of the interventions. It also explored some future implications, some potential challenges and some measures to take in future for sustainability of the centers.

Quantitative impact

The document analysis revealed that ALCs have provided 3723 females between 10 and 45 years old with an opportunity for study, and 126 teachers obtained employment. 116 teachers (the total number trained in Baltistan) provide literacy classes in the ALCs in

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1 In Pakistan, it is the custom for married women to live in the homes of their husbands' families.

the mornings, and in the afternoons they provide after-school coaching at home to an average of 23 students of formal schools. Additionally, each teacher conducts meetings with the women of three villages every month in order to share the learning and discussions carried out in the centers, and to discuss social and cultural issues related to their particular area.

In some villages there is no access to education beyond primary schools, especially for girls. In such villages coaching centers have been set up to provide tuition to those girls wanting to continue their education.

Through the coaching centers, access to education has been provided to more than 80 large and small villages. There are 2002 female and 18 male students studying middle and secondary level education in the coaching centers and 54 female and 99 males are teaching in these centers as paid tutors. Up till now 492 girl students have passed the public matriculation exam, of which 40 are working in NGO schools, 35 are teaching in the coaching centers, 70 are teaching in community primary and social action programme schools, 67 are working for health education, 2 are working in AKRS, P. Furthermore, 55 graduates of the centers are studying towards higher education.

Qualitative impact

It is understood that quantitative impact works as a motive or vehicle for making qualitative differences. The overall goal of the programmes mentioned above was to bring about change in the commonly-held discouraging attitude towards the education of females and their participation in the holistic development of their communities. The study resulted in the following very encouraging findings, which can indeed contribute to the overall goal of the interventions.

Promotion of awareness of the need for children's education

It was clearly and confidently mentioned by the study participants that not only the teachers of the centers, but also the graduates of the centers have started to give due importance to the education of their children. They send their children dressed in neat and clean uniforms, provide books and other material, give time for studies at home, and develop a schedule for their studies. Amina, a graduate of ALC, says "before attending this centre, I used to force my children not to go to school and go to the pasture to graze the sheep. But now I keep a check on my children's time schedule for study". Before, such women sent their children for games at a suitable time but they did not care about

their children's activities after school. A tutor of coaching centre Minapin in Nagar, while discussing the outcomes of the ALCs, said:

> Two of my sisters in-law are going to the ALC. One of them, although not having attended any school or centre, is very sharp. I was astonished when I saw her making my son (who studies in the infants' class) hold the pen correctly and helping him to write the Urdu alphabet. The boy was writing the letter 'bay' in Urdu (which gives the 'b' sound); he was writing it from left to right. She gripped his hand with her hand and helped him to hold the pencil appropriately, and to write from right to left, saying that we write Urdu from right to left.

Promotion of health and hygiene awareness

In the group discussion the teachers maintained that there was a clear change in attitudes towards health and hygiene.. Now the graduates, as well as other women of the villages where the centers are working, wear clean dresses, take showers and keep their children and houses as clean as possible. Fatima, a graduate of ALC, said that the women of her village observe Cleanliness Day each Friday. On that day, in addition to cleaning their houses, clean all the dirt from the streets. They also have increased the frequency of bathing. Amina, a lady from Shigar valley, happily stated that she did not even take a bath once in a month before, but now she as well as her children take a bath weekly.

Change in attitude of both men and women

There has been a considerable change in the attitude of both men and women. Husbands have changed their rude attitude into a more polite and encouraging one, as Bano from Bara village said:

> I feel very different now. My husband behaved very rudely and disgracefully towards me in the past. Now when he sees me gaining knowledge and helping my children with their schoolwork, he has no more negative attitude. Instead he respects me and lends a hand in the household chores.

The women also have begun to reflect on their attitude and given up their unacceptable habits. A student in this respect told her story:

> I used to have a lot of arguments with my mother and siblings. I quarreled

with my mother and disgraced her on many occasions, but after participating in the activities of this centre, I see a complete change in me. I cannot believe I am the same Kulsoom. Now I have realized the mother's worth and respect her and take care of my siblings.

These statements explicitly tell us that educational activities such as various discussions on diverse issues and the environment has broadened the thinking of people and has encouraged them to be more open-minded.

Development of self-confidence and decision-making

It is said that confidence creates a 'can-do' approach. In this study it was repeatedly mentioned that the women have built considerable confidence, and this has developed their decision-making power. Many young girls go and teach in the madrasa (religious schools). They also go together with the males to mosques during the religious days and take part in speeches and other related activities. A cohort of coaching centre students mentioned this with pride. They said that:

In the absence of our teachers in the centre in 1999, we decided to go in a group to the religious leader and tell him to ask our parents to allow us to come to the mosque, and we succeeded in doing so. If we had not taken that decision, we would not have been able to avail ourselves of any opportunity, and we would have remained confined to our houses.

Development of literacy skills in Urdu

A very encouraging impact of the centers is that those women who had never been to a school or a learning centre have also learnt to read, write and speak in Urdu (which is not their mother tongue). Fozia, in her study (ibid) has found that out of the 29 women interviewed, about 19 participants could read and write simple sentences and letters in Urdu, and 11 participants could speak Urdu. She further says that most of the respondents could easily understand her questions, and only five could not respond fluently. But they also seemed very confident as they interacted with her by using some vocabulary of both Urdu and Balti (the local language). A 36 year-old woman in Nagar seemed, throughout her discussion, as though she had completed her education up to secondary level, but at the end of interview it was learnt that she had not attended any formal school. She had gained confidence, knowledge and language skills from the three-year course in the ALC. She added, "I am now teaching Urdu to my daughter who is in Class 7".

It is hoped that if classes could be arranged for groups of females according to their academic ability, and if there were tests after each year of study, there would be many women like her who would easily pass the middle and matriculation level public exams.

Enhanced personal status and empowerment

Another potential contribution that these centers have made is that they have given an awareness of empowerment to women at the household level and even outside. They have realized their potentialities and capabilities through the lectures and discussions in the centers. Fozia (ibid) has written that Mehra Bano, a teacher from Khaplu centre, calls all the women from her village to her home once in a month and delivers lectures on different topics such as environmental, social, gender and health issues, and the importance of savings. The women share their experiences and problems and look for solutions. She further said that they eagerly participate in these gatherings and develop a sense of solidarity with each other.

This was very strongly noticed in Nagar region as well. On a visit to to that region in connection with this study, Hurmat Khan noted:

> When I entered the house that had been decided as the venue for the focus group discussion, I was surprised to see that there was nobody there. I thought that the women would not come for the discussion since the men of Nagar might not appreciate an outsider like me coming to discuss things with women. But after a few minutes I heard a lot of voices outside the room, and saw a woman opening the door. She paid regards and asked the others to come in. They were 14 of them, and they came into the room as if they were my students, and I had known them for many years. Moreover, the discussion was amazing. They responded to my questions and raised many social issues, which I could never have imagined or expected from such women. They said that they had been discussing such issues regularly in the centers and had come up with solutions for many of them. They added that they had started a campaign to bring all the school-age girls to school, and had succeeded, as all the girls except from one household had joined different schools.

It seems that women of that region have developed their understanding about social issues and the need of education for females. Another hidden factor could be that since women have been deprived of mobility for education and making decisions, they have

seized the opportunity and taken bold steps because of the open discussions they had in the centers.

Awareness and understanding of development projects

The learning in the centers has encouraged women to look for various small projects, which generate income for the community. Many participants have made money by utilizing local fruit and vegetables. They have established small projects such as making pickle and jam, and drying fruits. Thus they earn money and deposit it in the bank and use it for their children's education as they contributed their share for the matching grant scheme. (This scheme has been introduced by AKES,P to sustain schools and coaching centers by creating an endowment fund in which community savings are matched on a 1:5 basis.)

All these efforts indicate that women can make rapid progress in the overall development of any community if they are provided with opportunities for learning and with some amount of money to establish small projects and enterprises.

Challenges

The challenges are few as compared to the benefits of the centers. Almost all the samples of the study mentioned that the workload on women is much greater than that of men. They work to grow crops, look after livestock and do household chores. Secondly, the conservative attitude of some religious and political leaders does not fully encourage females to go to the centers. The third challenge is that very young women can neither go the coaching centers nor can they sit with the older women. Fourth, is the paucity of resources for salaries of teachers and for buying materials. Finally, the demand for a centre in each village is difficult to meet, as there are more than 1000 villages in the Northern Areas of Pakistan. Other challenges included shortage of time for satisfactory coverage of the syllabus, lack of coverage for certain subjects, especially English and Maths, lack of properly-conducted examinations and suitably qualified teachers. Some centers even had to close: it had originally been envisaged that in some areas where funding was short, communities would themselves take over the running of the centers after one year. In the event however, this did not prove practically possible. Additionally, some community/religious leaders do not appreciate female education, as Safullah (2002 p.12) found in his study. He writes, "Men seem to think that women need the kind of project which can increase production within the existing subsistence agriculture rather

than providing alternative activities which might offer women more economic and personal autonomy". All these factors have contributed to closure of some of the centers.

Future implications

The study revealed that the continuity of the centers in the future will have many advantages, such as the increase of the female literacy and employment rate. Constant efforts of women will change the conservative attitude of the religious and political leaders. Due to the importance to children's education given by the mothers, the quality of teaching and learning will improve in the schools. Women will be able to take appropriate decisions on their own. Local resources will be utilized for education and for generating funds for various projects of the government and NGOs run in partnership with the communities.

Measures for improvement and sustainability

The participants of the study came up with the following suggestion for the improvement of the function of the centers:

- Linkages should be created with government and other NGOs to create funds and to provide technical support to the centers and to increase their numbers.
- Opening centers at cluster level where one center will cater to all the adjoining villages and charging a fee to the students, will help to create more resources and minimize the demand for more centers.
- The AKRSP and AKES,P will have to frame active Village Education Committees and enhance the capacity of communities by providing them with training on planning and managing the centers and schools, as well as on mobilizing of local resources.
- The duration of the course might be increased and changed into a certificated course so that the graduates can get admissions in formal schools if they choose to.
- An increase in the number of experienced teachers will attract more women, particularly older ones, to the centers.
- It was also suggested that some of the content is difficult for older women, so reviewing it to bring it to their level would help all students to work at their own pace.
- Frequent monitoring of the activities in the centers will encourage both teachers and students to take corrective measures in good time.

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Annexure

Questionnaire for the impact study of ALCs and CCs

Adult Literacy Centers (ALCs)

1. How many ALCs were opened?
2. How many centers are closed and why?
3. How many centers are functioning now?
4. How many participants have completed courses from these centers?
5. How many teachers are teaching in the centers?
6. Are they doing any follow-up work?
7. In your opinion, what is the impact of these ALCs (qualitative and quantitative)?
8. What challenges do the students and teachers face while studying in the centers? Should more centers be opened?
9. In your opinion, what will be the actual impact of the centers on the society in the future?
10. What are the general concerns of the community activists and parents about the continuation of the centers?

Coaching Centers (CCs)

1. What is the number of CCCs, students and teachers?
2. What is the impact of the centers (qualitative and quantitative)?
3. Which fields are the graduates working in?
4. How many are enrolled in higher education studies?
5. In your opinion, what will be the impact of the centers on the society in the future?
6. What challenges do the centers face?
7. What challenges do the parents face?
8. How can we improve the function of the centers in the future?
9. Why do parents not avail the centers?

CHALLENGES AND LEARNING OPPORTUNITIES INVOLVED IN THE PROFESSIONAL DEVELOPMENT OF MATHEMATICS TEACHERS WITHIN THE GOVERNMENT SECTOR

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Abstract

As Professional Development Teachers (PDTs), we have been working in the government sector for the last several years to improve the profile of Mathematics teachers within the sector. Our experience of the Professional Development of teachers suggests that working in the government sector is not an easy task. However, neither is it an impossible one.

The government's system faces varied challenges in tackling the professional development needs of teachers. The most important one is the capacity of the professional staff to undertake this mammoth job. Secondly, there is a strong need to change the perceptions of policymakers to consider the professional development in the continuum rather than one singular event. This requires a strong support structure to conduct the Professional Development activities in an ongoing manner.

Through our paper, we would like to outline our experiences to present how we have become engaged in the processes of developing Mathematics teachers within the government sector and what are the challenges that we are facing in continuing our efforts to take these efforts further. It is also very important to mention that the Mathematics Association of Pakistan (MAP) has remained very responsive to our ongoing professional needs to carry forward our responsibilities within the government sector.

Introduction

This paper discusses our work within the government sector to improve the performance of Mathematics teachers in government schools. As already mentioned, our experience of the professional development of teachers suggests that working in the government

sector is not an easy task though not an entirely but impossible one either. This paper also discusses various challenges and issues we have faced in tackling the professional development needs of Mathematics teachers within the government sectors.

Through our paper, we will outline experiences of our engagement with the Professional Development of Mathematics Teachers in the government sector. It will identify the specific areas where Mathematics teachers needed support to improve their teaching performance. It will also include what we have achieved in terms of bringing changes in their existing beliefs and attitudes towards teaching and learning Mathematics. Moreover, we will discuss to what extent the teachers have appreciated and implemented the new ideas and skills related to teaching and learning Mathematics. In this paper, we will share what we have learned in our engagement with the Professional Development of Mathematics teachers. This paper comprises of six sections; namely, process, findings, and challenges and issues, lessons learnt, recommendations and conclusions drawn.

It is universally acknowledged that the role of teachers is pivotal to the quality of education in a country. It is essential that teachers maintain a high level of character, competence and display an ability to communicate and instill self-discipline, self-control and resourcefulness in their activities. But the existing situation of the schools in the government sector showed that teachers in these schools were not maintaining the standard of education in government schools. They were relying on traditional methods of teaching, neither enriching nor updating their content knowledge to keep pace with the changing system of education. The students received an inadequate education, and were not encouraged to give importance to relating practical and theoretical knowledge.

The officials of the provincial and city government conceptualized Professional Development Programmes for the teachers in order to expose them to new teaching methods, that would help them to re-examine and revamp their existing methods of teaching and bring about changes not only in their own beliefs and attitudes, but also in their teaching styles. To address these issues, the government sector has offered several programmes for teachers' development, such as Sindh Primary Education Development Programme (SPEDP), Girls Primary Education Development Programme (GPEDP), Middle School Project (MSP), and the City District Government Programme. The focus of these programmes has been to encourage the development of elementary and secondary teachers in the following subjects: Mathematics; Science; Social Studies; Languages (Urdu, English, Sindhi); Skill Development; and, Early Childhood Education.

The objectives of these programmes has been to:

- provide adequate professional training so as to make teaching / learning effective;
- keep the teachers abreast of new developments in curriculum, subjects and pedagogy;
- develop the skills and attitudes necessary to meet emerging national development goals and programmes;
- make teachers aware of the problems of the community;
- develop the necessary skills and attitudes enabling teachers to be effective change agents.

To achieve these objectives the officials organized a series of training programmes for teachers in these subject areas. We were asked to plan and conduct training programmes for the Mathematics teachers. In our planning, we had focused on the following skills, strategies and activities:

- Questioning skills
- Reflective Practice
- Cooperative Learning
- Problem Solving
- Do, Talk, Record
- Role Play
- Development of Mathematics Resources by using low / no cost materials
- Assessment and Evaluation

These skills and strategies enabled them to revise their existing beliefs and to start thinking about bringing about changes in their teaching methods. These training programmes were valuable opportunities for the teachers to enhance their understanding of teaching and learning Mathematics. The Mathematics Association of Pakistan offered two workshops, lasting for the duration of a week each, for government teachers. We were also assigned the responsibility to plan and conduct these workshops. The purpose of these workshops was to encourage government teachers to critically examine their existing practices and come up with ways to teach Mathematics more effectively. At the end of the workshops, the teachers were involved in designing action plans to implement these newly taught ideas in their classes.

The aim of these programmes was to assist government teachers in their Professional Development and make their teaching methods more effective. However, there were no follow-up activities included in these programmes to see the impact of strategies and

activities that had been introduced in these programmes. Therefore we decided to visit the schools and observe the classes of the teachers who had participated in the workshops, in order to see the effectiveness of the innovative teaching methods that they had planned to introduce in their classrooms.

Findings

This section will include findings from the observation and discussions carried out during the follow-up study on the impact of the new teaching methods on the teaching and learning of Mathematics in the classrooms.

Impact on teaching practice and students' learning

It appeared from our observations and discussions with the teachers that they have developed an understanding of the following areas:

1.   Understanding of Mathematics Content Knowledge

2.   Development of teachers' understanding of teaching mathematics

3.   Reflective Practice

4.   Designing and implementing Mathematics Resources

Understanding of mathematics content knowledge

Prior to the start of training programmes, we tested the teachers to see their level of understanding about Mathematics content and teaching methodologies. This test showed that they had certain misconceptions and lack of understanding in Mathematics content.

We tried to design activities related to Mathematics content in order to overcome these misconceptions but there was still a need to provide the teachers sufficient guidance for the enhancement of their content knowledge. Observing their classes and discussing their problems related to their understanding of Mathematics content with them during school visits addressed this confusion.

An apt example of this is of one of the teachers who had been facing problems introducing sets to his class due to his own misconceptions about "sets". He explained that he had been facing problems in introducing sets through the use of concrete materials. When

asked why he was confused, he responded:

> I had planned to use concrete materials like stones, matchsticks, toothpicks, bottle caps, tamarinds and date seeds to introduce sets, but I could not understand how these materials represented a set. I had tried to arrange the material according to their physical properties. In this way, I thought there were different sets of stones, match sticks, toothpicks, bottle caps, tamarinds and date seeds, but I was confused in counting the number of elements in each sets.
>
> For example, in a set of matchstick there were twelve matchsticks, so my understanding was that the number of elements is twelve. When I consulted the textbook definition of a set, it emphasized that a 'Set is the collection of well defined distinct objects'. Therefore I was confused."

After this discussion, I suggested that he do some reading on the topic of sets and I provided him with appropriate reading material. We also arranged a meeting in which I would work with him on the task of introducing "sets".

Similarly, the teachers also enhanced their content knowledge while engaged in designing activities. In a discussion about enhancing content knowledge one of the teachers responded:

> Previously I always placed emphasis on the textbook problems. However after attending the workshop, I have started thinking about activities beyond the textbook. This helped me to overcome misconceptions about mathematical concepts. For example, I used to show ratios in the form of fractions e.g. $2:3 = 2/3$. I did this because it was presented this way in the textbook.
>
> However, when I consulted a reference book to find activities related to ratios, I did some reading on the concept of ratios and realized that ratios could not always be written in the form of fractions.

The two examples above demonstrate that the teachers started thinking to deviate from the textbook-oriented activities and are trying to be more creative in their teaching approach. This has enabled them to overcome misconceptions as well as enhance their understanding of Mathematics knowledge.

Teaching mathematics: development of teachers' understanding

The strategies and activities that the teachers learnt during the workshops helped them to bring changes in their teaching methods. During observation and discussion it was found that they were trying to bring changes in teaching mathematics. Their main focal points of change are:

- Introducing group work, pair work
- Encouraging students to interact with their colleagues and with their teachers, creating a friendly environment.
- Designing activities beyond the textbook
- Encouraging students to ask questions
- Appreciating students' work

It was very encouraging for me to see the positive changes when I visited a school to observe a Mathematics class. Although the class size was large, the teacher handled the class effectively. He had divided the students in groups and each group was assigned a task. He took rounds and encouraging group members to share their ideas with the other group members. The students responded positively and were actively involved in the tasks. They helped each other to understand the task and willingly shared materials.

When I asked a group of students regarding their feelings about the changes that had been implemented in their classroom, they responded:

S1: Previously I never talked in class because I was shy, but working in a group provided an opportunity to share my ideas with the other group members, enhancing my confidence.
S2: It was very interesting to sit in a group and share our experiences with the other group members.
S3: We learnt from each other.

These examples show that the teacher effectively involved students in the task through group work. In a discussion about the impact of group activities on students learning, the teacher says that the students learn a lot from each other. They share their experiences freely while working in groups.

It was encouraging for me to see that the teachers were trying to invent their own problems to develop their students' understanding about the Mathematical concepts. For example,

a teacher was teaching a lesson on percentages. Instead of starting the exercise from the textbook, he divided the class into groups and posed a problem to them. He asked them to write down the Mathematics test marks of the class. Then he asked them to discuss the following in their respective groups:

- What were the total marks?
- The relation between marks obtained and the total marks.
- What would be the marks obtained if the total marks were 100?

The students in groups started working on the questions whilethe teacher moved around the class to listen what was being discussed. After the task was completed, he asked the groups to nominate one group member to present the group findings on the board. Different solutions came up where some groups solved the task by using the unitary method, and others solved it by using ratios and proportions. The teacher asked the groups to explain the process. It appeared from the example that the teacher, instead of explaining directly the rule of finding percentage allowed them to work out the problem by using any method. After getting the explanations from the students, the teacher explained how to calculate the percentage. This teacher had realized that allowing students to use the method of their choice helped them to develop a more solid understanding of Mathematical concepts.

Reflective practice

One of the main aims of the training programmes was for participants to reflect on their practice and to recognize their own strengths and weakness. An analysis of one's thinking is challenging one's own established ideas, encouraging change. Recognizing this, the PDTs supported participants by encouraging them to reflect and analyze through the use of a variety of strategies. Activities to promote and sustain reflection included:

- Maintaining a reflective journal
- Critical discussion of sessions
- Evaluation and analyses of lessons
- Reviewing the students' learning

A reflective journal is one of the tools to improve one's teaching practice. During different programmes, we decided to introduce this strategy of reflective practice to improve and understand their teaching. Through this practice teachers can grow both personally a well as professionally. Teachers must reflect on their own practice because it helps them

to better understand what it means to be a teacher. Schon emphasizes the importance of "thinking about one's teaching." and another author defines this process of reflection as "an important human activity in which people recapture their experiences, think about them and evaluate them." Teachers should be provided with opportunities to critically analyze daily practices on an ongoing basis and explore alternatives for improvement.

The method we had adopted to introduce this aspect required participants to be given the question "What did you learn today" at the end of each day. During the next morning session, two or three participants shared their reflection in front of the class. Only the facilitators were allowed to comment while the teacher shared their reflections. The purpose of this activity was to give the teachers feedback and appreciation on their reflections and offer them suggestions to improve their writing. The facilitators gave input on reflective practice for four to five days. After the facilitator's input, the participants were also allowed to give their comments and suggestions on their colleagues' reflections.

Through this activity we observed that teachers took a keen interest in their writing and realized that this exercise was pivotal for them in their teaching practice. During the discussion on reflective practice, we were told that the teachers continued to write in their reflective journals even after the training programme was completed. (See some examples of government teachers' reflection)

Designing and implementing mathematics resources

Science exhibitions are very common in schools, but nobody thinks of Mathematics exhibitions as a strategy to encourage achievement in Mathematics. However in the workshops, teachers realized the value of Mathematics exhibitions to enhance students' conceptual understanding of the subject.

This was our experience in designing and displaying Mathematics resources by the subject teachers while conducting several training programmes / workshops in the government sector. Teachers took a keen interest in making these resources and not only designed Mathematics resources, but also used these resources in their teaching practice (Microteaching). While designing Mathematics resources in groups, they also provided group reflections, where they discussed their experiences of working in groups and the challenges they faced. While they were engaged in designing Mathematic resources, they were asked to consider various questions such as:

- How will the resources be utilized in the classroom?

- What Mathematics will be taught using the resource?
- What were some issues / concerns that came up while working in your group?
- Was there any tension among some group members? Why or Why not
- How would you describe your learning, in term of Mathematics, group collaboration and others' teaching contexts?

During the process of designing Mathematics resources, the teachers interacted with each other and discussed different concepts of the subject, realizing how different areas such as Arithmetic, Algebra and Geometry are interconnected and how the resources could be utilized in effective teaching. During the display of Mathematics resources, different group members were asked what the purpose of designing Mathematics resources was. Here are some of their responses:

> Through these resources we can make learning interesting and we can motivate the learners.

> Abstract ideas and concepts could be clarified easily. Sometimes we teach these ideas directly by introducing formulae and it becomes difficult for students to understand. I really enjoyed this experience.

> Through these resources, textbook problems can be related with practical life and we can invite students to share their own practical knowledge. We can confirm and verify rules and principles of Mathematics. For example abstract concepts such as variables, constants, co-efficients, expressions and others can be strengthened, through pattern seeking. One of the rules, $(a + b)^2 = a^2 + 2ab + b^2$ could be verified by drawing lengths and breadths of square and rectangle.

Challenges faced by PDTs

- Heavy workload due to series of workshops
  Due to continuous involvement in different government sector projects, we had a heavy workload to complete, along all with all the tasks related to each project.
- Lack of interaction between PDTs and government officials
- Interruption of government officials during the activities of workshops
- Lack of resources
- Dealing with teachers with less content knowledge
- Documentation of work

- Absence of participants
  One of the challenges we faced during the programmes was that most of the time participants were absent due to their own work at home or somewhere else, which affects their learning, it showed that they did not give importance to their learning.
- Perception of policymakers to consider the Professional Development as an event
- Lack of physical facilities

Challenges faced by teachers

- Large classes
  During the observation and discussion with the teachers, they mentioned that they were worried about the large class size because they were unable to control the class. Noise level was very high during the delivery of the lesson.
- Heavy furniture
- Lack of resources
- Completion of syllabus
- Time duration of the period
- Non-availability of resource room
- Lack of interaction among subject teachers and head teachers
- Lack of coordination between school heads and DOEs

Lessons learnt

In this section we discuss what we learnt during our period of engagement with these professional development activities for teachers. We also want to suggest ways to overcome obstacles for us during the process of the workshops.

As PDTs, we feel that an engagement with such programmes offered by the government sector enhanced our understanding about the nature of activities required that would best meet the Professional Development needs of the participants. It was our first commitment with the government sector as PDTs and we were unfamiliar with the behavior and attitudes of government officials. However with the passage of time, we learnt how to deal with these officials. It is the tendency of these officials to want to work according to their own agenda. Keeping in mind this situation, we did not insist on our ideas followed their instructions. To overcome this problem, we discussed our ideas related to Teachers Development with them and convinced them to give us a free hand in the selection of content for the workshops. It was very encouraging for us that these officials

started thinking about incorporating our ideas of Teacher Development. This example showed that while we could not achieve our goals at once, we had to wait for the appropriate time to convince other people of the validity of our ideas and our positive outlook.

Another important fact we realized during this process was of attitudes of teachers from the government sector. We had previously thought that these teachers were rigid and working with them, challenging their existing attitudes and teaching methods. We were surprised when that they kept an open mind and started to revise their attitudes and beliefs from a very early stage in the workshops. They were ready to accept new ideas and realized that there is a need to bring a change in their existing teaching practices. They were curious and motivated towards change. This showed that it is unfair to pass a judgment about these teachers without first working with them.

As it has been mentioned in the paper, many participants have faced problems in Mathematics content which was incorporated in the activities. We think that it would be better if we conduct a needs analysis before selecting the Mathematics content.

The participants of these training programmes were from government schools, where the medium of instruction is Urdu. The handouts and other material that we prepared was in English language, which in our opinion was unfair. Realizing this, we planned to provide Urdu translations as wellthough it created financial problems. It would have been better had we prepared handouts and other material in Urdu from the beginning. This would have been cheaper and more practical. As teacher-educators, we have to think about the background from where the participants come from.

Participants initially felt that the new teaching methods were time consuming and that there was not enough time to complete their lessons through activity-based teaching. Realizing this, we decided to demonstrate, the efficient use of Mathematics resources through practice lessons. This helped them realize that it would be possible if there was appropriate time management implemented. As teacher-educators, we have to provide practical examples to support what we are saying. Planning and implementing summer workshops with the team of facilitators from the MAP platform was really a wonderful experience for us, where we learnt how to negotiate and interact with people.

Recommendations

As Professional Development Teachers, we want to share the following suggestions,

which may help policymakers and other officials in launching new Professional Development Programmes:

- The Professional Development Programmes need to be ongoing.
- There should be follow-up activities, to see the impact of the strategies.
- Enough time should be allocated for need analysis and planning.
- The responsibility of preparing a programme handbook and writing reports should be given to tutors instead of other writers.
- Appropriate physical facilities should be provided to participants and facilitators.

Conclusion

From the above examples, it seems that teachers' implementation of newly established ideas have brought changes into their teaching practice. Although these changes may not be major ones, the outcome of these changes is apparent in terms of students' learning. The teachers are putting in their maximum efforts to shift their classrooms from being teacher-centered ones to being child-centered however they are still facing challenges in trying to convince stakeholders of the meaningful learning outcomes.

It is encouraging to see that the teachers are analyzing their practices critically, which in turn, provides an opportunity for students to develop their conceptual understanding. As far as the impact of these changes on students' learning is concerned, it seems that students are now actively participating in learning activities. The use of concrete material in different activities creates active involvement of students. In fact students are now enjoying Mathematics. We may say that changes in the teachers' teaching practice and attitudes enables them to create a classroom environment where students actively participate. This results in the improvement of the quality of education. Our findings showed that these small changes make a big difference.

PDTS' IMPACT IN AKES,T: 1996 - 2003
MAKING A DIFFERENCE?

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Abstract

Professional Development Teachers (PDTs) are Master of Education (Med) graduates of Aga Khan University Institute for Educational Development (AKU-IED) in Karachi, whose major task is to improve the quality of education and ensure quality of output in their respective systems. This paper looks into the work PDTs have been engaged in and the way it has impacted on school and staff development in both Aga Khan Education Service, Tanzania (AKES,T) and other systems in the region. Successes and challenges have been highlighted together with some data as evidence collected and documented from the field by the PDTs themselves.

The paper particularly focuses on the PDTs' impact and the difference they have made from their work as professional development teachers in Tanzania and in the East African region from the years 1996 to 2003. The paper also touches on the issues related to PDTs' duties and responsibilities and, recommends on developing reliable measures of PDTs' impact.

Introduction

AKES,T like all the other Aga Khan Education Service companies worldwide, is a non-profit service company whose 4 schools (one secondary, 1 primary, 2 Nursery Schools) are run as not-for-profit Institutions. Surplus revenues collected are ploughed back into schools to maintain the infrastructure, update materials and equipment for the students and to pay for various professional development activities for the administrators and teachers. Of the 140 teaching staff population of the AKES,T, 9 are PDTs, 2 of whom are still not fully-fledged PDTs, 35 are graduates of Certificate of Education Programme (CEP) offered by the AKU-IED (VTs) and 11 have undergone Professional development programs at International Academic Partnership (IAP) at Philips Academy, USA.

Several School Improvement initiatives have been implemented at AKES,T beginning in the 1980s in order to achieve the level of excellence in our schools. To date, our 7 PDTs have actively inducted about 80% of our teachers who have now shown a paradigm shift from didactic to interactive mode of teaching. In addition, the Professional Development initiatives and activities in AKES,T schools are well structured and integrated into the school time-tables and calendar. Typically, of the 7 hours of the school day, the PDTs spend 2 hours on these initiatives and activities in their schools. Some of the activities impacting school improvement which the PDTs have been involved with covers the following areas:

- Classroom based Action Research in Schools
- CEP and CEM programme facilitation
- Monitoring and Evaluation of the CEP and CEM impacts
- Conducting an In-service Workshop at Arusha (request for AKES, T by Al-Muntazir)
- Selection of M.Ed. Candidates (using the PDTs' Knowledge, expertise and exposure)
- Implementation of the East Africa Strategies in Education (EASE) activities (e.g. Inspection, Common Schemes of Work, setting of regional Exams)
- Writing of Best Practice papers for AKES,T

Of the 7 PDTs working in Tanzania, 2 are at the central office in the education department, 1 is with the PDC Lead-In project, 2 are at the Aga Khan primary school and 2 are at the Aga Khan Mzizima secondary school. The team usually meet twice every month to share their experiences and strategise on their professional development initiatives.

PDTS' Major duties and responsibilities

PDTs in AKES,T engage in the following activities

Staff development

PDTs carry with them a vision of quality input in terms of ensuring that teachers are recruited to enrich the curriculum, develop teaching and learning materials, with proper use of resources as well as excellent infrastructure. Our PDTs have been putting across new ideas and practices in school through role modelling and mentoring impacting about 100 teachers in our schools. Newly recruited teachers have been mentored by the PDTs in the art of teaching and sometimes the mentoring takes the form of coaching in order to help the mentees to unlock their natural abilities to perform and learn in the teaching profession.

Ensuring quality of Process (providing high-achieving teaching and learning environment, engagement in co-curriculum activities)

PDTs have worked with AKES,T teachers in designing a performance target profoma for every subject taught in AKES,T schools for monitoring and evaluation purposes. From the year 2000, the PDTs have been appraising all the AKES,T teaching staff using an appraisal instrument that was designed by them and approved by the AKES,T Board of Directors.

Ensuring quality of Output (reflected in student outcomes - as skilled learners, of sound and multifarious abilities)

PDTs in Tanzania have been guiding AKES,T teachers in coordinating tutorials for students, conferences with parents and in identifying students' individual needs and attention. Reports on the impact made on these areas are being submitted to the Board of Directors and its recommendations shared with the schools every four months throughout the years. Some of these recommendations have also been used by our PDTs in picking and carrying out focused educational research. To date, PDTs have continued teaching AKES,T teachers to carry out classroom based action research and up to now 4 action research reports have been produced.

Facilitating on going staff Professional development programmes through in-house (School-based) training programmes such as ICT and English proficiency programmes

PDTs have also been facilitating the CEP/CEM programs - Activities related to PDC Lead In project. In addition, from the year 2001, PDTs in AKES,T have fully been involved in the whole process of recruiting M.ED candidates for the AKU-IED coming from Tanzania.

The number of Course participants now reads nine.

PDTs' Impact at School and Individual levels

The impact of professional development interventions by the PDTs can be viewed in terms of individual teachers' growth and in terms of the whole school development or improvement. PDTs have made a positive contribution to both the professional development of teachers, heads, deputy heads and School Inspectors and, the AKES,T management.

The government of Tanzania acknowledges the fact that the provision of quality education and training is the ultimate goal of any education system and favours enhancement of partnership in the provision of education and training, through the deliberate efforts of encouraging private agencies to participate in the provision of education, to establish and manage schools and other educational institutions at all levels.

To date, the PDTs have facilitated 12(+2) CEPs and 5(+2) CEM courses to 297 (+30) teachers, 78 heads and deputy heads, 20 school inspectors and educational officers in the country working in both the AKES,T, government owned and private owned schools. The CEP addressed the following subject areas: Math, Science, Primary Methods, Language and Social Sciences while the CEM aims at streamlining the management structure of education, by placing more authority and responsibility on school heads, local communities, school inspectors/education officers districts and regions.

At the AKES,T management we have two of our PDTs working as Education Officers and the third as an instructor with the PDC Lead-In project. These three, together work to identify the critical priority areas for PDTs to concentrate on, for the purpose of creating an enhancing environment for teacher professional development and school improvement that will impact a greater number of teachers. In the schools we have 3 PDTs who are working as deputy headteachers and are facilitating well the growth of collaborative culture of education through formal and non-formal education relationships and role modelling.

Individual teachers in the schools have commended the work of the PDTs in the AKES,T and see them as role models in teacher professional endeavours. They find their work more meaningful and enjoyable as a result of the Professional Development activities facilitated by them. A total of 143 teachers in AKES,T schools have benefited from these in-house Professional Development activities. Some teachers, as a result, have been able to conduct action-research in their schools, write reports and share 4 of these reports with other colleagues in the network schools.

PDTs' works in Tanzania have been felt worth with by other learning institutions delivering education services. In the year 2001, for example, a PDT from AKES,T was invited to go and conduct in-service teacher training workshops in other private institutions in the country. He has delivered 2 such workshops up country benefiting 53 teachers of the AL-Muntazir organization in Arusha, Tanzania.

Significant difference made?

So far PDTs' work has mostly been rooted in the AKES,T schools, a few partner schools within Dar-es-Salaam and the Philips Academy in the US. This being the fact, we wonder whether we have made any significant impact to bring about an 'observable change' to the quality of education in Tanzania. While it may be true that we have made an impact to the AKES,T and the partner schools, but we are afraid we have not done so to the majority of Tanzanian schools and teachers at all levels. Increased access to in-service teacher training of teachers, needs proper training policy that will guide, synchronize and harmonize structures, plans and practices by both the AKES,T and the government of Tanzania.

The exemplary work of our PDTs of leading and facilitating educational programs in schools, has led to the AKES,T teachers to be seen as 'experts' by fellow teachers of the neighbouring schools, especially during the subject association panels and conferences that are held regularly in Dar-es-Salaam.

PDTs in Tanzania have brought about a good understanding amongst the teaching and non-teaching staffs through socialization, sharing research findings and working collaboratively. This has wiped out completely the aspect of balkanization in the AKES,T schools.

The Challenges

We have always known that the quality of PDTs' work has a major impact on pupils' attainment in our schools. The 'inputs' of PDTs' work are the characteristics and the styles the individual PDT brings to the role - the drive, commitment to staff and professional development, problem solving and influencing skills. The measures of success of PDTs' work can be seen in those we facilitate whether they are motivated, inspired by our work and fully engaged to improve the quality of teaching and learning.

PDTs in Tanzania are challenged to:

a) Ensuring that we do not lose sight of the fact that Professional Development activities is the key to the provision of quality education in our schools.
b) Address the high expectations of AKES,T, PDC-Lead-In project and individual PDTs and teachers in general on:
   - How to balance the expectations?

- Balancing innovation overload!
- Dealing with pressure of time (for teachers, facilitators, Inspectors, Managers, Consultants, etc)
- Addressing varied individual Professional development needs of our teachers in the schools.

c) Design assessment instruments for the assessment and evaluation of the Impact made by the PDTs(Often Stakeholders carry different views on the Impact made).

The way forward

We hope to continue bringing the change to Professional and staff development within AKES,T. PDTs' role should be that of developing a teacher better - make the best from the classroom teacher. We see the following as the ways that will aid us in that direction:

a) Teamwork and developing others: Continue with the ongoing in-house Pd activities that will produce a forum for teachers to update their skills and information by keeping them abreast of current issues in education. Also continue helping them Implement innovations and refining their practice. As PDTs we should foresee the long term development of our teaching staff through soliciting and valuing the input of individual teachers and create opportunities for them to experiment and improve.

b) Maintain high levels of drive and confidence: Prioritize in carry out research activities, especially classroom-based action-research that are carried out by teachers to create new and more powerful kinds of knowledge about teaching and learning. This will provide inspiration and confidence to teacher professionalism.

c) Stay visionary and accountable: Role model and guide teachers to integrate Information and Communication Technology (ICT) into their professional lives in order to provide them with rich learning opportunities. A PDT who leads with an inspiring vision and accountability is likely to be an effective teacher educator and a transformational leader. PDTs' impact in education will come through creating a compelling picture of where you want and influence the pupils, teachers and the school to go.

Recommendations

We recommend the following:

a) Reliable Impact measures need to jointly be developed by PDC/AKU-IED/PDTs so that it can more accurately assess 'Change' as a result of PDT interventions to affect School Improvement. At the end of the day the teacher in the classroom is the main

instrument for bringing about qualitative improvement in learning.

b) A PDT forum should involve other key partners to set up 'Terms of Reference' (ToR) for PDTs and discuss on how to measure the Impact/appraisals.

c) The AKU-IED should continue to monitor the Impact of the PDTs through PDCs, AKES and its research unit.

d) The 50/50 split in PDTs' work is very stressful. The high workload it imposes on PDTs and the potential of burn out, as well as the perceptions that schools are paying full salaries for half work leads to stress and low morale. We suggest an alternative model of PDT work should be developed by the PDC Lead In project in collaboration with the PDTs and the Schools' Management.

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IMPACT: MAKING A DIFFERENCE

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Abstract

The purpose of this document is to explore the diversity of perspectives on school improvement. It also chronicles the programme activities at PDCN, the rationale and evolution of the model Whole School Improvement Programme (WSIP), and the process and modus operandi of the working team of PDCN. It also portrays the modified version of WSIP, its impact on school improvement and the challenges that have emerged from it, along with our recommendations for further improvement.

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PDCN at a glance

PDCN started functioning in 1999 from a rented building and moved as soon as the present premises were ready, in October 2000. The explicit purpose of establishing this institution was to provide a centre of excellence for educational professionals in Northern Areas and is a joint venture between Aga Khan University Institute for Educational Development (AKU-IED) and the Aga Khan Educational Services, Pakistan (AKES,P) and is managed by AKU-IED. The project is funded by the European Commission and has entered into the second five-year phase of NPEP. The faculty members of PDCN are MEd graduates from AKU-IED.

PDCN offers professional development programs and its activities are spread over selected school systems in all districts of Northern Areas such as Gilgit, Skardu, Ghizer, Diamer and Ganche. It develops capacity, offers programmes and does research in collaboration with its main partners, AKES,P, the government and the private sector.

It mostly offers two types of courses: Courses certified by the AKU-IED and those by PDCN. By the end of 2002, the percentage of stakeholders' participation in AKU-IED and PDCN certified courses are as follows:

AKU-IED Certified Courses:	AKES,P = 53.4%
	Govt = 39.6%
	Others = 07.0%
PDCN Certified Courses:	AKES, P = 26.0%
	Govt = 49.7%
	Others = 24.3%

Mission statement

> The mission of the PDCN is to develop and adopt activities and strategies that will lead to an improvement in the quality of education in the Northern Areas. We aim to work in partnership with government and local organizations, build local capacity, conduct research to test ideas and influence policy, and develop assessment and evaluation procedures in order to improve practice and help identify what works and why.

The Whole School Improvement Programme (WSIP)

The Whole School Improvement Programme (WSIP) has been PDCN's 'flagship' programme since 1999. It addresses the dilemma that newly-acquired skills often erode and the status quo is re-established. PDCN supports the point of view that there is little teacher development without school development. Effectiveness is enhanced if schools and newly trained individuals are able to move forward at the same pace.

WSIP focuses on the following six areas to improve schools as a whole:

- Quality of Teaching and Learning
- Leadership, Management and Administration
- Curriculum and Staff Development
- Community Participation
- Building, Accommodation and Resources
- Social and Moral Development, and Health Education

Programmatic activities

Apart from the WSIP, the PDCN offers a Certificate in Education: Educational Leadership and Management courses for head teachers of WSIP, and some head teachers of non-

WSIP schools to develop their leadership and management skills in tandem with other school improvement-related activities. It also offers a Certificate in Education (CE): Social Studies, for teachers. PDCN provides a venue for discussions on initiatives taken by other departments in line with the quality of education in the Northern Areas. Such discussions are held in the form of Educational Forums, which are now referred to as Policy Dialogue. The Women Support Group is another programmatic activity that the PDCN initiated to supplement working-women in the Northern Areas. It also provides Short Awareness Courses for the teachers of partner organizations in order to give them an awareness of gist of activities in terms of quality education.

In collaboration with its chief partners and at the request of various organizations, the PDCN has offered the following need-based courses to these organizations:

- Educational Leadership and Management workshops for middle management and high officials of the government educational department
- Mentoring programmes for mentors of all partners
- Special workshops for various schools i.e. Army Public school, Al-Mustafa Public school and HERP
- Courses for teachers associated with the World Wide Fund, Pakistan (WWF)
- Urdu language teaching workshops for PDCN faculty, Government and AKESP.

Research

The following research projects are presently under way or have recently been completed:

- Mapping Changes: A study of the effects of the WSIP and CEM programmes
- An Investigation into the Effectiveness of an Environmental Education Programme
- The Spread of the use of the English language in Two Districts of the Northern Areas: A Comparative Study of the Impact of WSIP, 2000 - 2002
- The meaning of the construction 'English' in English-Medium Private Schools in the Northern Area.

PDCN also hosts the USAID Project IV of AKU-IED, which documents the best practices in community-managed schools, as well as investigates multi-grade teaching in the Northern Areas.

Achievements 2000 - 2003					
Programme / Activity	**2000**	**2001**	**2002**	**2003**	**Total**
WSIP Graduates	84	103	104	124	415
CELM Graduates	21	25	29	25	100
CE Graduates	--	25	--	23	48
Short Awareness Course	56	54	58	60	228
All Other Programmes**	--	18	160	110	288
Grand Total	--	--	--	--	1079

Rationale and evolution of WSIP in Northern Areas of Pakistan

Before the establishment of the PDCN, a lot of impressive teacher training programmes had been launched in the Northern Areas. These programmes included the Field-Based Teacher Development Program (FBTD), Language Enhancement and Achievement Program (LEAP), Northern Areas Education Project (NAEP) and the MEd and VT at the AKU-IED.

PDCN emerged as a center of excellence and a successful joint venture between AKES,P and AKU-IED, both having an innovative approach of professional development as well as school improvement in the region.

Before the formal functioning of the PDCN, a group of PDTs carried out a *Needs Analysis Survey* in all five districts of the Northern Areas. The survey revealed that the training courses did not have the expected impact on teaching and learning in schools as, according to the stakeholders, the theoretical aspects of training courses did not dovetail with practicality in actual context. Thus, PDCN needed to have a model that would meet such challenges and one that could make a difference in terms of teaching and learning and improving schools in Northern Areas. To that end, PDCN had a three-day Stakeholders' Conference from the 15th to the 17th of June, 1999 with education providers (AKES, Govt. and NGOs) to share findings and develop a common understanding to adapt this model to improve the quality of teaching and learning in schools.

On the basis of findings from the Stakeholders' Conference, the PDCN was given a

mandate to launch the WSIP as a strategy to bring about a positive change to the school contexts in the Northern Areas. This approach seemed quite appropriate, especially as the head of PDCN had experience with the aforementioned model, working in Kampala and Uganda, East Africa.

The conceptual framework that underpins the WSIP is derived from research studies on school effectiveness (Hopkins, 1990; Levine & Lezotte, 1990) and school improvement (Stoll & Fink, 1996). The main principle of the WSIP is to treat the school as the unit of training, rather than the individual, with the long-term aim being the development of effective group dynamics and collegiality amongst teachers, students and communities for the purpose of ongoing educational dialogue and improvement. The six main aspects of school improvement mentioned earlier, should be addressed concurrently.

Before the PDCN started its work, teacher training was thought to be the way to improve children's learning. Often teachers were taken away from their schools for training, and then sent back to implement the new style of teaching. The objective of the WSIP approach is to go beyond individual teacher training, and to improve an entire school as a whole. It is a time and energy intensive approach, in which PDTs work in the school with heads, teachers and students together. Our exposition of the six areas shows that many aspects of a school must be improved simultaneously if the situation of the school is to really change. It is for these reasons that we, the Professional Development Teachers (PDTs), work alongside teachers, heads and pupils within their contexts, to find appropriate strategies for improvement.

WSIP pilot programme

Before direct intervention, it was decided to go through the process of piloting, in order to test the model, assess challenges encountered and most importantly, to professionally develop the team. There were eight schools in the pilot project: three government schools, three AKES,P and two private schools. The teachers in these schools worked with PDTs, for the equivalent of two days a week and attended weekly workshops after school hours. The PDTs worked as colleagues, critical friends, master trainers and resource persons. The process proceeded with the following steps:

Orientation workshop

The heads of these schools attended a three-day Management Training workshop at the onset of the program followed by a two-day workshop at the end of the pilot project.

The chairs of the school committee attended one session to learn about the WSIP and to sign a Memorandum of Understanding (MOU). It needs to be emphasized that because the pilot project was only eight weeks long, findings could not be generalized. However, it did help us raise issues, pose questions, identify obstacles and celebrate small successes.

A special workshop was conducted about the AKES,P and AKU-IED Programme and the exposition of the role and function of the PDCN. Their initial perceptions of WSIP were elicited here. The six areas of school effectiveness were introduced and translated by the participants. We wanted all the members of the teaching staff to understand the philosophy and process of the WSIP before we started. The session provided an opportunity to be self-critical and retrospective as well as prospective. We wanted to present some practical examples of the fundamental changes we were trying to introduce in schools. Teachers hesitated to try out strategies, since they had not experienced such themselves. We wanted to give teachers the experience of working with literature, to enrich the curriculum and their own understanding to encourage them to try this particular teaching method with their own students.

Material making / resources development

Schools in the Northern Areas are not supplied with sufficient material to provide quality education to children. We wanted to show that 'no-cost' and 'somewhat-cost' resources are necessary to improve schools as a whole. We wanted teachers and head teachers to think about how they could obtain such material for their schools when the WSIP was over. We were planning on a ground where schools are not treated as learning organizations. The lack of collaboration among various stakeholders involved has developed a fragile culture within the systems.

Our critical learning from piloting the WSIP:

It was obvious that the WSIP would not be the answer to all the ills that beset schools. WSIP is very time consuming and resource extensive and it requires patience on the part of the PDTs as well as a lengthy time period to bring about changes that often result in unpredictable outcomes. (Educational Forum on WSIP-pilot, March 2002).

We also learned that if we wanted sustainable improvement or change, the following areas would need more attention:

- The responsibility for professional development must rest with individual professionals

or stakeholders
- School leadership and management need to focus more on providing support
- Monitoring, supervision and professional support
- Raising community awareness and sharing responsibility for the learning of children

Follow-up and support mechanism

The opportunity for teachers to improve themselves is an important element that is absent in the entire process, and there is also a lack of an in-house professional development culture in schools. Other shortcomings include the absence of merit-based appointments and a shortage of physical and human resource in-terms of building and staff.

We learned that the model of the WSIP would not succeed in an educational climate, one that does not provide schools with the necessary support. We aimed to continue refining the model, but argued that lack of content knowledge; weak leadership, a poor school climate and a weak infrastructure were our biggest challenges.

Amongst these six areas of the school improvement, leadership and management is one of the most important aspects of the WSIP.

Our pilot experience revealed that motivation and effective involvement of head teachers would have a positive impact on the staff's working style. During school visits where the heads worked with PDTs and supported teachers in attending workshops regularly, preparing lessons and enriching textbooks and curriculum, both the teachers as well as the students became enthusiastic and were motivated to learn.

We worked to provide an effective learning environment and attempted to influence policy but at the end of the day, this was difficult because other partners did not execute their responsibilities effectively. School Improvement and sustainability requires team-work, honest partners and genuine efforts to bring about a positive change.

Process of WSIP and modus operandi of the team:

WSIP is a process where the first year entails extensive fieldwork. It begins from December and ends in the same month of the next year, continued with a two-year follow up in the related schools and encompasses the following steps:

Selection of schools

WSIP begins with school selection procedure, where faculty members meet the heads of the concerned departments (government. education department, AKES, P and private sector) to seek their permission for school selection. Schools are selected according to certain criteria, which include:

- schools that are close to each other in order to form a cluster where teachers from all schools can easily assemble to attend weekly workshops;
- an equal ratio of schools from all sectors (Government, AKES,P and Private);
- a balanced ratio of male and female teachers in schools;
- good strength of male and female students in the schools
- a willingness to work in deserving schools, where the PDCN's intervention is needed; and
- the whole staff's willingness to partake in the WSIP's objectives.

Selection of Master Trainers

Short-listed Master Trainers from partner institutions on a need basis are selected by faculty members. They are interviewed at PDCN and selected MTs are given contracts along with their job descriptions.

Orientation for the selected school teachers

Teachers from selected schools are invited to attend the orientation workshop at PDCN for the purpose of getting them familiar with the philosophy behind WSIP and also to pave the path for working with them in field operations. Orientation workshops are usually held in December and January when schools are off and the PDCN team is nearly ready to have its intervention in the field. Certain themes are covered in the orientation and teachers are in the position to highlight school-related issues and possibly their solutions when they get back. Thus it helps the faculty to establish a working relationship with teachers before the actual WSIP intervention.

Baseline survey

Before launching the WSIP activities in the schools, a base line survey of the schools is conducted where the existing situation (overall physical environment and structure) of the schools is video recorded and photographs are taken for purpose of logging the

survey. Faculty members interview teachers, head teachers and community members using structured forms and get information about physical structure of schools, management and administration, the nature of community involvement and teaching and learning and their working relationship at the academic level. The main purpose of the baseline survey is to keep records of each school and see the difference by way of comparison at the end of WSIP process. It also helps faculty members give priority to particular areas of improvement and think about basic questions of where to start and how to start.

Memorandum of Understanding (MOU)

Faculty members with the help of head teachers hold meetings with School Management Committees (SMCs) and Village Education Committees (VECs) or Parents Teachers Association (PTA) before formally commencing WSIP activities in schools. During these meetings members are briefed about the WSIP's whole process. The initial meeting is one of the ways to involve community representatives in the process. The members sign a Memorandum of Understanding, which means that they agree with the process and activities of WSIP.

Intensive working procedure in schools

Faculty members then undertake certain activities in the project schools. Usually the following six areas are focused in the process:

Teaching and learning

In the first few days, teachers are observed so that the existing practice in the schools is known. Faculty members and MTs then help teachers in planning their lessons and provide constructive feedback on their lessons. We demonstrate lessons in the classes in presence of teachers, do pair / team-teaching and help them in enhancing content knowledge and methodology.

Leadership and management

Head teachers from project schools are simultaneously involved in the CELM course and the WSIP course. Thus head teachers get a wider learning experience to be pedagogical leaders in the school context.Curriculum and Staff Development

Using mobile library books and other reference books that are provided by the PDCN

enriches the national curriculum. Teachers are urged to maintain reflective journals to keep a record of their practices and through doing that learn more about their profession. Weekly workshops are conducted for the project schools' teachers at any one school. Different articles on teaching and learning related to school improvement are handed out to the teachers and they are encouraged to thoroughly read and discuss them.

Community participation

Community participation is ensured through different ways and means. Mothers' Day is celebrated in schools and mothers are encouraged to visit schools and witness the teachingand learning process in the classrooms. Meetings with mothers on a class basis are arranged to discuss particular issues. Faculty members and head teachers hold meetings with SMCs / VECs and PTAs. Community mobilizers are selected to work for schools.

Building, accommodation and resources

The PDCN team works on creating possible space for establishing a library/resource room. It also tries to arrange shelter for classesthat are conducted in an open-air environment. Vacating staffrooms and merging staff members into head teachers' office, along with making portions in the classes, if possible. In most cases head teachers have separate offices and there are separate staff rooms for teachers and also separate offices for school secretaries while children are seen sitting outside in the scorching heat and severe cold. In such cases changes are made with the consensus of head teachers and teachers. The PDCN team also tries to develop resources and works on how to utilize available resources in a better way to make teaching and learning meaningful.

Social and moral development of children and health education

Stories are told during class sessions for the purpose of cultivating a sense of morality in children. Students are encouraged to read library books and share information with their colleagues during the assembly. Speeches are delivered in the assembly and students are given a chance to express themselves in the morning assembly. A fortnightly or monthly Buzm-e-Adab is also managed during which children present different activities and are encouraged to take part in turns. Workshops on health education for teachers, community members/mothers are conducted in schools and teachers are encouraged to have such sessions in their classes. Guest speakers are invited from the health sector to talk about health education to give more awareness to children, teachers and mothers.

Mobile Library Service

PDCN provides hundreds of books to the project schools on a fortnightly basis, a process that continues for three years. The main purpose of providing the mobile service is to develop a reading culture among students and teachers of Northern Areas.

Action research in schools

Project teachers are involved in action research as part of their assignment for certification. Through action research, teachers try to resolve school related issues and thus move a step ahead towards school improvement.

Reinforcement workshops

At the end of the academic year teachers are invited to the PDCN to attend reinforcement workshops, which are subject based. This is done in addition to subject-based workshops, which are conducted in the field on a school cluster basis. Report Writing

Faculty members write mid term and final reports on each school about each and every activity, the impact of WSIP, and challenges encountered, teachers' efforts, their plus points and flaws along with recommendations for further improvement.

Certification of CPs

At the end of the academic year, teachers and head teachers who meet the criteria ,are certified by AKU-IED. This certification means the completion of given assignments; 95% attendance, punctuality, showing interest and commitment in school improvement and maintaining reflective journals.

Follow-up of WSIP

The PDCN continues its support in terms of conducting follow-ups on a fortnightly basis and offering the mobile library service for the subsequent two years.

Evolving models of WSIP at PDCN

The model at the beginning of WSIP and up to 2001

As mentioned earlier, the WSIP has a school-based focus for a period of at least one

academic year, continued with less intensive support in the second and third year. It is for these reasons that a pair of the Professional Development Teachers (PDTs) worked in each of the clusters (in the field) for four days in a week in the process of WSIP. On Fridays, the PDTs came back from the field to attend Friday sessions in order to share their field experiences. This model was followed during 2000 to 2001.

Modified model in 2002

In the year 2002, the working pattern undertaken by the PDTs in the field was modified slightly where the selected teachers and head teachers were involved in an orientation workshop at the PDCN before its formal intervention in schools. It was done to make CPs aware of the philosophy of WSIP and to establish a strong working relationship with them. Following the model, one of the faculty members worked in each of the clusters along with two Master Trainers (AKES,P and Government) for three weeks. The purpose of involving MTs was to prepare them for working on school improvement in their systems in future. After three weeks of intensive fieldwork, the team (faculty and MTs) came back to the PDCN and spent a whole week sharing field experiences with other faculty members and planning for the next three weeks' fieldwork.

Further modification in 2003

On the basis of field experiences during WSIP-2002, the working pattern in the field was modified. In the new model, the working duration in the field is two weeks and the remaining two are spent at the PDCN. The rest of the working pattern is more or less the same as follows:

- Involving teachers, head teachers and MTs in orientation workshops at the PDCN over the course of ten days.
- Following the orientation, one of the faculty members works in each of the clusters along with 3 / 4 Master Trainers from (AKES, Pakistan, Govt. organizations and NGOs.) for two weeks (up to 6 days per week) .
- During field operations, faculty members and MTs document the ongoing activities and develop their reflections. After two weeks of an intensive intervention in the schools, faculty members come back to the PDCN and spend a week in following up on schools from the 2002 session, and an additional week on their professional development and planning for the next two weeks fieldwork. Meanwhile, the MTs carry out fieldwork in schools and come to the PDCN during each alternate month. This working pattern continues for the whole academic year.

Impact of PDCN's programmes

Any kind of effort or contributionalways creates a positive or negative change to make a difference in the culture, beliefs, and practices of human beings. As a team of professionals, we also made efforts to make a difference in terms of bringing about a change in the context of the Northern Areas of Pakistan. These claims are not based on formal research but are based on faculty members' observations, evidence from reflections, reports and field notes. The following narration reveals the impact of PDCN's intervention through PDTs in the field of education:

Classroom teaching and learning process

In order to bring about improvement in schools, the first and foremost aim is to change the teaching and learning process. Keeping this in mind, we selected a specified number of schools to test new ideas and methodologies to watch and learn what works, why and how. As a team, we realized that going to the school and working with the teachers there brings home the realities of educational issues.

On-the-job training

On the job, we offered training in terms of demonstration, team teaching, co-planning, debriefing sessions, developing resources and their utilization in classrooms. Ultimately, teachers used the ideas and continued to carry them out in a similar way. We regarded the practice of one class-one teacher as an essential foundation of learning. Making portfolios and involving mothers in preparing low cost materials had a great impact on students' learning. One of the mothers shared her experiences with the faculty saying her child (class one) came home from school and said that he would need her help. She agreed but asked how she could help him. He brought a piece of paper and asked her to help him draw a picture of an animal. They drew one and the next day, he went to school very happily. She said, "Now he is so enthusiastic in sharing academic activities with me and I too look forward to hearing him out. . Both of us enjoy his schooling now" (faculty's field notes - dated June 7, 2003).

Conducting weekly workshops after school hours without disturbing teachers' and students' routine work was a great opportunity for teachers to equip themselves professionally. Ultimately, schools, where,the staff worked according to the conceptual framework, became learning organizations because of the sharing spirit, learning from each other, solving one another's problems and making important decisions. As a team

we realized and noticed that there was turbulence and differences in the school culture in respect of making friends, building teams, responsibility, motivation and commitment with the school. By way of example, a head teacher and a teacher of a girl's school were transferred twice. They requested the ADI not to transfer them because they had put in a lot of efforts into making the school move as a team. If one or two were to be transferred, then the school would decline again. This indicates their intrinsic motivation and commitment to improve their school.

Mobile Library Services

Evidence revealed that the mobile library system had developed a reading culture among teachers and students to quite an extent. Now when we talk to children about what they read in the books that were provided, they can effectively narrate a gist of the stories in them along with remembering the authors' name and the title of books. We also observed that teachers now use library books in their classes to enrich textbook stories and other topics. The library services strengthened the PDCN's mission to demonstrate and differentiate between curriculum, textbook and enrichment of knowledge through different sorts of books.

Students' learning outcomes

The focus of the PDCN was to develop students' conceptual understanding, rather than passing tests and examinations. However, we also knew that learning at school is exam-oriented. Keeping this in mind we considered moving within the framework of school systems and trying to enrich them with current ideas and methodologies. We mostly used storybooks in schools and showed teachers how to tell and teach stories and link them with students' prior knowledge and textbooks. Consequently, we observed that the students' level of confidence was greater and their understanding grew substantially and they were confident in expressing their feelings, experiences and understanding through retelling those stories, drawings, linking with their prior knowledge, asking some critical questions and participating in role playing.

Creativity in portfolio

We demonstrated and encouraged the teachers to bring about a change in their practices and maintain individual portfolios by keeping the records of their creative pieces of work. As time passed, we saw that there was a gradual improvement in students' creativity in terms of drawings about different characters of stories, science projects and other

subject related activities. It also helped incline parents towards children's learning when the portfolios were shared with them.

Improvement in results

In the majority of our WSIP schools; as the level of confidence, motivation and commitment had increased; there was an ultimate positive effect on students' results. For instance, results in nursery up to class two remained 90 % to 100 % specifically, and class three to five generally improved.

Professional attitude of teachers

Teachers developed a stronger awareness about their roles and responsibilities, adopting a positive working approach. They worked intensively even after school hours and worked in teams (subject-oriented) rather than in isolation. They also observed each other's lessons and gave constructive feedback to each other, which helped them in growing professionally. Teachers and head teachers were confident in conducting workshops for other colleagues when needed.

Teachers took the responsibility to prepare their lesson plans and learned how to arrange and utilize resources. WSIP bags were used purposefully and when the materials were finished, most of the teachers managed to replace them, which was a good sign in terms of sustainability.

Sometimes we would clean the classrooms, pick up litter from the floor and put them in dustbins, rather than wait for the maid or students to do so. We also sat on the floor with the children and facilitated groups to make the teaching and learning effective and more productive. Soon we observed that the egocentric behavior of teachers and head teachers changed into a positive professional working style.

Leadership and management

The Certificate in Education: Educational leadership and Management (CELM) program and the WSIP helped the head teachers develop a common understanding of generic and subject specific learning. These programmes, especially CELM, helped head teachers understand and develop a few skills in handling the change process, plan for school development, managing human and physical resources in their schools, building school teams, resolving conflicts, monitoring and evaluating pragmatic activities on the whole.

Both programmes played a vital role in bringing about changes and improvement. For instance, some of the heads of the schools developed a more amiable relationship with their staff, provided professional support, delegated tasks among staff members and empowered them. This kind of attitude not only develops motivation and commitment, but also influenced the whole culture of the schools and the outlook of the staff in order to share and learn from each other. Furthermore, there were also some implications of the leadership and management programme in schools. For example, introducing the "one-class, one-teacher" concept in schools and seeking clarification and support on school-related issues etc. when the faculty paid follow-up visits.

Evolving process

The emergence of the WSIP from the stakeholders' conference and the offer of a Leadership and Management Programme from AKU-IED facilitated PDCN to find ways and means to experiment and test different sorts of ideas and methodologies. Our working style in the actual context of a school gradually strengthened our theoretical perspectives. The Friday sessions enabled our academic team to share its forte; areas for improvement, learning and further reflections opened ways and means to explore the process. This continued on in a cyclical manner like an action research model (e.g. plan, act, observe, reflect and re-plan.). Yet the process evolved programmes, activities, different methods and strategies and models. It generates hypotheses, rather than testing them. The process of working in the schools developed confidence in the AKES to start its own WSIP. Furthermore, the government requested the PDCN to plan for their WSIP 2004 (which is in the pipeline). This does not only indicate that the PDCN has won the trust of the system but also indicates that our working process has raised the expectations of the education providers.

Thrust for PDCN and our selective and reflective approach

PDCN has been growing and developing gradually and noticing a multiplier effect on different stakeholders such as teachers, students, parents, communities, and education systems. We have been getting a lot of applications and requests for different programmes from different communities and NGOs. Therefore, we have been trying to be very selective and reflective in order to maintain the quality of our programmes. Before making decisions, we reflect collectively, argue and debate among our team in a professional way to avoid making mistakes erroneous decisions.

Working in real-time as professional growth

In order to develop on a personal and professional level, we recommend testing one's learning in a real classroom situation. This is because theoretical knowledge is something different from practical demonstration and it varies from context to context, as each context is unique. Therefore, one needs to test out ideas in order to see what works and what does not and that, then should be modified. Such an approach develops problem-solving and decision-making skills. Thus, we come to know how to deal with different stakeholders, manage and organize human and physical resources, resolve conflicts, monitor progress and performance and evaluate the whole process.

Love for children and empathy for human beings

Another innovative experience is that we have been serving different communities. This brings a variety of experience and diversity in the classroom. According to Fullan. M. (1999), "Diversity is strength". It becomes interesting when we go to the school after a long period of time. Different teachers comment, "It has been a long time since we saw you", "We waited for you", "We have been waiting for you", "and we missed you" (faculty' field notes an on going basis).

Some of the staff's welcoming behavior becomes a great source of motivation and commitment to our profession. It gives us feedback that we have been doing a good job. Their friendliness enables us to pull through unfavorable conditions.

As a whole, if one wants to grow personally and professionally, WSIP's roots are powerful enough to allow us to achieve our professional goals. Ultimately, it has had a positive consequence for school improvement.

Challenges and constraints

Our working experience reveals that the WSIP and other programmatic activities of the PDCN had a profound impact but the journey and process of school improvement was not free of constraints. Some of the challenges we encountered, are briefly mentioned as follows:

- It was not easy to change the embedded school culture where teachers are usually not ready to leave their respective comfort zone and mostly they have a sense of dependency.

- Teachers have high expectations from faculty members and expect to have answers for every situation. Having limited subject expertise and without having any administrative authority and pressure it was difficult for PDTs to deal with every situation.
- The main issue was finding the time for planning or reflecting on taught and observed lessons. There were a limited number of teachers in schools and they too remained busy in teaching all the time and were reluctant to spare time after schools hours to discuss and plan lesson. Some of the teachers were opportunists and were in the habit of a "one day show". In the presence of PDTs they did what was expected of them but in their absence, the teachers reverted back to whatever they used to do.
- Improper school buildings with small, dark and messy rooms were main hindrances to effective teaching and learning. In most schools, there were no heating arrangements in winter and it was not easy for teachers, students as well as for outsiders, to be involved in teaching and learning effectively.
- Having wide differences between schools / organizational policies and the philosophy of WSIP was a big challenge. Despite several presentations and debriefings, the system's people were unable to understand and support WSIP, which sometimes, created frustrations for the PDCN team.
- An insufficient teaching staff, dependence on volunteer teachers and untimely transfer of employees and head teachers created big gaps in the WSIP working mechanism.
- English has been introduced at primary level in the government system but the teachers' content knowledge is so weak that teaching English is a big issue in schools. It is even more challenging for those students who have moved to upper classes without learning English from the start and the content of such classes is beyond their capacity.
- Most of the teachers attend training courses but do not change their mentality and their way of working.
- The idea of involving master trainers in WSIP was to address the issue of sustainability. When they are back within the framework of the system, they are not involved accordingly.

Recommendations

Looking at the scenario of school improvement in the context of Northern Areas, we recommend the following:

- To ensure sustainability the partner institutions must understand the philosophy of

WSIP and encourage it in their respective systems to practice it honestly and professionally.

- WSIP Master Trainers must be involved in the areas for which they have been trained. They must be involved in initiating WSIP activities in their respective systems with full support from their superiors.
- Teachers as well as head teachers of the project schools should not be transferred for a certain period so as to sustain the initiatives taken in schools.

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SCHOOL WORK ENVIRONMENT AND ITS IMPACT ON THE PROFESSIONAL DEVELOPMENT OF NEWLY INDUCTED TEACHERS

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Abstract

This paper attempts to share some of the experiences regarding the nature of relationship between the work environment and the people working in it. The paper is based upon the outcome of investigation made in one of the private schools of Karachi, Pakistan. The data is collected through conducting surveys, interviews and observations. It contains a snapshot of one of Al-Murtaza School (AMS) Network. The work environment provides a perspective of its impact on the professional competences and development of newly inducted teachers and offers a comparison of new and more experienced AKU-IED trained teachers' perceptions about the work environment of their context. The interaction between newly inducted teachers (NIT) and their work environment is considered in order to give ideas about what is happening in these schools after the Aga Khan University Institute for Educational Development (IED) developed a 'Critical Mass'. How newly inducted teachers start their professional career in a particular context, how their professional competences might be promoted, and how much (Critical Mass) trained from AKU-IED is involved in the professional development of newly inducted teachers.

An outline of the study conducted using Al-Murtaza School Work Environment Scale (AMSWES) is that AMS Network has a set mechanism of in -house training programmes, consisting of different modes and each branch uses different methods for professional development of NITs. The AMS' Professional Development Centre (PDC) also contributes to in-house training. The prominent methods are peer-coaching, Visiting Teachers (VT)- Non-Visiting Teachers (NVT) cycle, weekly subject-based co-ordination meetings, culture of microteaching and writing reflective journals, informed as well as uninformed classroom observations followed by feedback. AKU-IED trained teachers, senior teachers and senior management of the school, who are also AKU-IED trained, are completely involved in the process. The study reveals that the NITs find this process quite comfortable and helpful as they get to learn / help in lesson planning, classroom management, activity - based teaching, making effective assessment papers and using innovative ways of teaching. The process also helped to develop the self-confidence of NITs.

The finding demonstrates that almost all the respondents have clear understanding about the work environment. They also stated that the environment is highly co-operative and friendly, but some of them found it challenging and threatening in terms of coping up and bringing about changes in attitudes and practices, and implementing in real classroom situations.

However, the finding demonstrate that almost all the respondents, both to the questionnaire and interviews, have strong feelings about the heavy work pressures they have to cope with and want more support from the senior management.

The outcomes of both the AMSWES surveys and interviews reveal a number of perspectives. Therefore, the information collected from this study is of specific significance to NITs' professional development, AMS Network, and other member schools of AKU-IED, which may have implications for developing NITs' competence in Pakistan.

Given these findings, the importance of reducing teachers' work pressures and seeking more effective support from school management should be given priority in order to promote the effectiveness of NITs' transition. Also, given the heavy work- load, the teachers' considerations should be given to the possibility of establishing norms in terms of relief to help NITs to maintain their professional development in schools. This would undoubtedly help school management to take more responsibility for NITs professional development. It is important that NITs have a supportive work environment in order to transfer and build upon the knowledge, skills and attitudes for continuous professional development, which must become the norm alongside teaching, not just an activity to be 'filled in' when and if the pressure of the job allows.

Introduction of Al-Murtaza School Network

Very early on, in its rather short history, the Board of Governors, entrusted with the leadership and management of the Al-Murtaza School, realized the value of providing opportunities for in-service training and professional development to its teachers and supervisors. Initially, the teachers and supervisors were sponsored for attending workshops and short courses offered by organizations such as the Teachers' Resource Centre (TRC), and the Society of Pakistan English Language Teachers (SPELT). Later on, in 1993-94, when the Aga Khan University established its Institute for Educational Development (IED), Al-Murtaza School became a 'partner school' of AKU-IED. With this step, new

vistas of teachers' education and professional development were opened for the staff of Al-Murtaza School. Since then, a substantial number of our teachers and school supervisors have benefited from the various courses and programmes offered at AKU-IED. As the number of trained teachers kept growing, school-based professional development programmes were developed, such as Saturday workshops, workshops during summer breaks, the Visiting Teachers (VT) and Non-VT cycle based on the notion of peer coaching. The crucial point, perhaps, of these initiatives has been the recently launched School-Based Certificate in Educational programme. Not only that this programme reflects the school's confidence in its own human resources, it is also an evidence of the great confidence that AKU-IED has in Al-Murtaza School's professional, academic and managerial capabilities.

The major focus of the Al-Murtaza Professional Development Centre (AM-PDC) is ongoing professional development of teachers and supervisory staff of the Al-Murtaza and network schools. The professional development programmes organized through AM-PDC are based on needs analysis and fit into the school development plans.

Methodology

Human beings are normally affected by the school settings in which they are involved. In the recognition of this fact, much research has been undertaken over the past 25 years to conceptualize and assess work environments and their impact on individuals. To this end, researchers have developed a number of measuring instruments and procedures to identify the most salient aspects of work environments. The Work Environment Scale (Moos, 1994) of Britain is one of them. The AMS Work Environment Scale (AMSWES) is very much similar to it, which is used for this research study.

Work environments, also labelled by researchers as work climate or organizational climate, refer to the concept of environmental quality perceived by the people concerned. Deer (1980) suggests that the word 'climate', when used in a meteorological sense, refers to the average daily weather conditions over a period of time. In the organizational sense, it refers to the norms or perceptions the individuals have about their daily work climate, and is used to refer to the same notion.

A number of educational researchers, Fisher & Fraser (1991), who have used it in their research, argue that the WES can be used to plan, monitor and change school work settings.

In this study, a version of AMSWES was used for the research, with 68 teachers from four branches of AMS Network in Karachi, Pakistan. This sample provided a representation of AKU-IED trained teachers as well as senior and newly inducted teachers (NITs) of AMS network. The data gathered from the responses identify the differences in understanding the schoolwork environments of NITs and AKU-IED trained and experienced teachers, and highlight the salient interactional effects between the AMSWES subscales.

Ten teachers were interviewed at four of the schools where the questionnaire was conducted. The interviewees at each school included the senior experienced AKU-IED trained teachers, as well as the NITs. The interviews were focused on a wide range of issues, varying from discovering people's understanding of the term schoolwork environment and the professional competences of NITs, to identifying particular situations in which NITs work at AMS.

Research methodology

- Survey Questionnaire of AMS
- Interviewees
  - Stakeholders
  - Senior teachers (trained, untrained)
  - Newly inducted teachers
- Sample at
  - AMS (Boys, Girls, Junior)

AMSWES
- Relationship Dimension
  - Professional Responsibilities
  - Peer Support
  - Stakeholders' Support
  - Physical Environment
- Personal Growth Dimension
  - Work Autonomy (work pressure, resource availability)
  - In-house training
  - Task Orientation
  - Challenges
- Curriculum Dimension
  - Syllabus
  - Textbooks

- Resources
- Assessment
- Lesson Planning
- Innovations

Findings from the AMSWES survey

The analysis of the research survey reveals that the teachers' involvement and peer cohesion are above average. However, their score on the supervisor support is average. The term supervisor support means 'the support given to teachers by senior managers, who are AKU-IED trained teachers at AMS'. On the personal growth dimensions, autonomy has an average score, while task orientation and work pressure have a higher score. especially the score on work pressure. On the system maintenance and change dimensions, their clarity of expectation for them, management control and innovation are somewhat above average while physical comfort is rated very high.

The surveys administered in Al-Murtaza School network indicates high commitment of teachers to their work, moderate cohesion among teaching staff, but with extraordinary strong pressure to keep up with the never-ending workload. Most of the respondents felt that new approaches to tasks were encouraged at their school and perceived their work environment as efficient and well-organized. They believed that they got clear ideas as to expectations about school rules and procedures. There was a moderate degree of control over teachers so that they had a degree of innovation. A pleasant surrounding was the characteristic of their settings. However, what is most noticeable is that the respondent, especially experienced teachers, believed that they had extremely little support from their senior managers. However, the experienced and AKU-IED trained teachers stated that they got lots of opportunities to grow professionally by conducting workshops and attending courses for further development.

Involvement and peer cohesion, co-ordination meetings and short courses at AMS network and AMSPDC has important influences in determining how far and in what ways NITs get integrated into a school's work environment. They showed a high degree of commitment to their new career. They were generally satisfied with the help from their experienced colleagues. They felt that the rules and regulations of their school were not very strict and there was little control over their activities, but to some extent it was challenging for both the groups.

The overall culture of the school depicts a professional touch whereby every body talks

about students' learning (achievements and shortcomings) and reflecting upon their practices and seeking alternatives.

However, all the teachers felt that work pressure and shortage of time were the two major challenges which affected their performance.
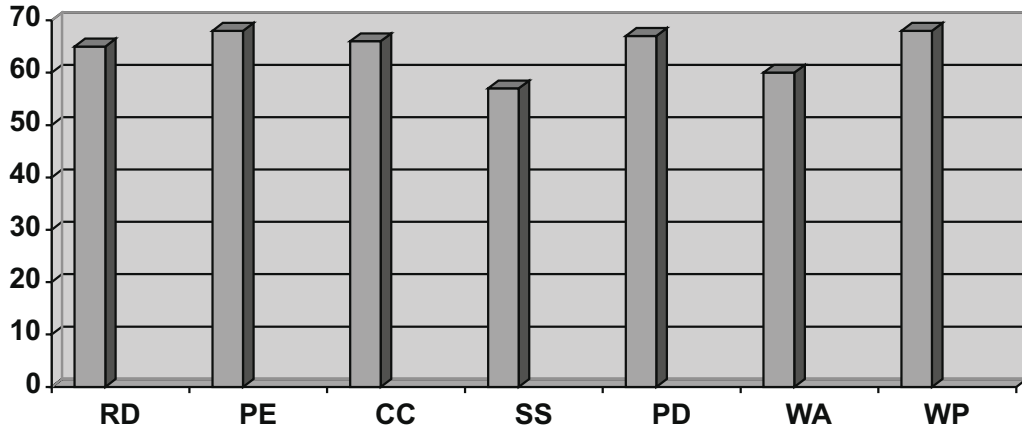
RD: Relationship Dimension
PE: Physical Environment
CC: Co-operation & Collegially
SS: Senior/Stakeholder Support
PD: Professional Development
WA: Work Autonomy
WP: Work Pressure

Discussion on information from the interviews

All the people interviewed showed a strong interest in the effectiveness of NITs transition from their initial teaching practices to their current teaching positions. They had an awareness of what the term 'schoolwork environment' meant and recognized that each school has a particular work environments with emphasis on specific aspects. Through these descriptions, ideas could be obtained about how schools operate and in what way it sets its values, attitudes and beliefs: "We are a friendly and welcoming school, committed to high standards of achievements, behaviour and discipline. We provide opportunities for participation, responsibility and leadership. Our staff contributes to the development of the school by offering outstanding excellence in education and devotion to their

students."

Schools try to provide a work environment in which individuals can be satisfied. The interviewees believed that was the basis for school successes: "The mission of the school is to create a positive environment which is intended to raise the quality of education in AMS Network by providing teachers with better resources and job satisfaction, more appropriate in service training and better planned career development based upon more informed decisions.

The appraisal format of AM -quite clearly indicate this mission for assessing teachers performance."

Most interviewers believed that school environment had been greatly influenced by the changes in education in recent years, which has brought about tremendous pressures on teachers and greatly revised the expectations of schools. NITs start their profession in this situation:

> Teachers have been under more and more pressure over the last eight years. Since we had to plan use of innovative ways. We have seemed to have a lot of changes. Their pressure has brought about great influence over many aspects of schoolwork environment, eg, students' performance to its competence.

> For instance, because of the changes occurring in curriculum, there is enormous amount of paper work, huge volume of paper work. That certainly means that staffs are more tired more stressed. They have more work to do. The genuine perception now is that pressures have markedly increased, that affects every one in school. It clearly gives the message that you have to grow professionally by benefiting from the mechanism of in-house training programme and the professional activities taking place at AMSPDC.

The interviewers regard inter-personal relations as a crucial component of schoolwork environment. There is an indication that the relationship between staff members is generally supportive. However, most interviewers argued that there was a definite gap between senior management and other staff. This is confirmed in the information from the AMSWES surveys in which the scores on the supervisor support are average. It is noticed that on this aspect and some others, senior managers had different views from

those of other staff members. Usually, managers see them in much more positive terms.

> (A teacher) Most of the teaching staff here are really friendly and supportive. They are understanding and co-operative as well. However, I would say there is a definite gap between the senior management and the staff, not necessarily on an individual basis. This gap, I believe, exists in all schools we may be able to relate to the members of senior management team. A team apart from the rest of the staff.

> (A school manager) I think the senior management, who are AKU-IED trained, are trying to support the teaching staff. I don't know if people always see that because working in different groups and areas, we have different responsibilities, but not because we don't relate to them. Perhaps, they see more often we are not supportive. Sometimes we know confidential information that we cannot tell people. So they think there might be a reason why the senior management has done this or that.

NITs are in a position where they have to face a number of challenges. These challenges are not there only due to the pressures the teachers usually face, but also due to the nature of schoolwork. They need a set of competencies to meet these challenges:

> Teaching is really challenging. It is not an easy job, there are always high expectations of teachers, you have to have some thing to teach, you have to plan your lessons and manage the classroom, and you have discipline problems to cope with. In addition, you have to meet parents, you have to work with senior teachers. Today, you have to solve a problem and another problem comes up tomorrow. There is no end. To reach the requirements for competence is also challenging and NITs have to face all challenges from the day they start their work.

Many interviewees argued that NITs professional competence includes two major aspects: first, they should have good knowledge and apply it well to teaching situations; secondly, they are expected to learn classroom management:

> As a teacher, not necessarily NITs but any person, you have to have something to teach your students and organize and control the classes properly. These are the two important competencies.

> First of all, obviously, we look at their subject knowledge and subject application. Have they got the knowledge of different teaching styles? Can they spot one teaching style is appropriate and the other is not?
>
> After that we look for basic classroom management and discipline skills. Can NITs go into a classroom and post what is happening there, organize it properly and efficiently so that things can be controlled and saved? That is the basic competence.

These points of view are in line with that competence defined by the Al-Murtaza School network administration in its appraisal format.

To reach the requirements for these competencies, NITs need to acquire a number of qualities, such as commitment to outstanding excellence in education, devotion to their students, enthusiasm for their work, ability to cope with pressures, being good at learning for others and working in a team:

> Most of all I will be looking for the kind of qualities, which, to a certain degree, I believe are very important for NITs to develop their competencies. Some of these are innate qualities and some need to be learned through practice or training.

Many of the people interviewed agreed that schoolwork environment was an influential factor that affects the competence of NITs, which is mainly gained through initial teacher training but their other competencies come with experience and practice. It seems obvious that schoolwork environment exerts much influence over NITs classroom management and other competencies:

> NITs have just got their subject competencies in their academic carrier but haven't got enough classroom teaching skills and other competencies. They come to the school and are soon involved in what we are doing. Our values, attitudes, ways of working and ways of communication will impress them in one way or another and certainly will influence their attitudes towards their work.

It is important, according to some interviewees for NITs, to feel comfortable with the values and attitudes of the school. If they were not able to work in a school with a good feeling, then it would be difficult for them to develop their competence well and, perhaps,

they would have to give up their jobs:

> I personally think the staff here has good values and attitudes and their values and attitudes are getting better and better. The vague thing you say about is the ethos of the school or the feeling in the school. If I worked in the school with a very bad feeling, I would certainly not be able to stand up to that and would give up the job. If NITs were not able to enjoy their life here, they would not be able to develop their competence.

Some interviewees stressed the importance of NITs' adoption to schoolwork environment. They were of the view that NITs have to fit in as soon as they could and provide their input to it:

> I think it is a very valuable point that you want your NITs quickly imbibe your work environment and subscribe to it. It is not enough for them just to know it. They have got to be a part of it and develop it, because schoolwork environment is made up of people at the school. It is not a piece of paper that you read and throw away. It is the sum of all the people who are there, hopefully, with the common vision pulling in some direction. What you want of NITs is somebody who could come along, subscribe to that work environment and make some input into it, actually contributes to it, actually contributes to its development, not just simply receives it.

An interviewer raised a set of issues on how NITs were influenced by schoolwork environment. First, they face new systems, new values and attitudes. Secondly, they have to meet the new expectations and requirements of the school.

> Schoolwork environment affects NITs in many ways. They have to work in a new system. The values and attitudes of the staff may be new to them as well. They also need to know the school's expectations and requirements of staff. A school has its particular work environment and NITs need to come to understand what it is like because it does affect you. For example, if a NIT doesn't know what the management expects of its staff, he/she would certainly have difficulties meeting the school requirements. NITs might come from a university where self-care is stressed, but there is emphasis on team spirit at the school. They soon find the difference and integrate themselves into the values and attitudes of the school, assuming that they are competent at teaching and meet the requirements of the

school.

It is in this context that the importance of the support from the senior management and trained teachers should be seen. Although the AMSWES survey indicates an average degree of supervisor support, the interviews provide the evidence that each of the four schools have established a set of support networks, NITs inductions programmes and professional development systems:

> In terms of helping NITs, this school is the best school. There is a lot of support from the senior management and heads of the departments. NITs have their professional mentors and subject mentor. I have a professional mentor for NITs. I give them advice on dealing with their difficulties; at the school we have a programme of training and mentoring so that NITs do not feel they are working by themselves. They have a system of peer-coaching, microteaching, co-ordination meetings, discussion sessions and workshops. They work with a team at the school.

Appreciating that every school has its particular set of rules that influences the competence of NITs and they face some challenges when they first come to schools, some interviewees confirmed that NITs have a lot of individual support: "We have some support programmes for NITs, which are sorted out carefully between whatever practical things they need to know, and visionary things that we feel they can appear to. So they obviously do have a lot of personal support through their heads of departments. Then they have their whole training programme support as well."

One of the effective ways of helping NITs is the exchange of lesson observation between NITs and trained/-experienced teachers, followed by structured feedback sessions. This has been used as a means of monitoring and improving NITs competence and has been welcomed by both the sides:

> NITs are helped to observe other teachers' lessons, we also observe their lessons. Usually, these observations are the mixture of their subject knowledge, classroom organization, teaching skills, use of teaching language and pupils' discipline. In addition, we look at the relationship between NITs' and pupils, the pace of the lessons and variety within the lessons, and the self-confidence.

Some interviewees emphasized that the most important support to NITs was encouragement.

This means concentrating on the positive while helping them to address their weaknesses.

> It is important to be encouraging, trying to ignore the negative and concentrating on the positive. It is to make them more social, perhaps, better than the practical teaching tips. It is more of making the person feel comfortable and have self-confidence.

Some tentative conclusions

The AMSWES surveys and the follow-up interviews have helped to elicit teachers' perceptions of the work environment of their schools and provided an insight into its impact on the professional development of NITs. The respondents felt that NITs were required to be involved in their teaching. There have been induction programmes, which are intended part of the environment of their schools. Schools' rules and policies are explained to NITs explicitly.

The interaction between NITs and the work environment of their schools takes place on the basis of individual conditions found in different branches of AMS schools. Adequate evidence has shown that the schoolwork environment is an important factor in NITs' professional development. They are expected to develop their competence in the context of the particular work environment of their schools, under the influence of the values, attitudes and beliefs of the senior management who are AKU-IED trained and the learning performance of students. The impact permeates the initial period and, possibly, a longer period throughout NITs' career. and affects their working style of teaching. However, the findings demonstrate that almost all the respondents, both to the questionnaire and interviews, have strong feelings about the heavy work pressure they have to cope with and want more support from the senior management.

The outcomes of both the AMSWES surveys and interviews reveal a number of perspectives. Therefore, the information collected from this study is of specific significance to NITs professional development at AMS Network and other member schools of AKU-IED, which may have implications for developing NITs' competence in Pakistan.

Given these findings, the importance of reducing teachers' work pressure and seeking more effective support from school management should be given priority in order to promote the effectiveness of NITs' transition. Also, given the heavy workload of teachers, consideration should be given to the possibility of establishing norms in terms of relief to help NITs to maintain their professional development in schools. This would undoubtedly

help school management to take more responsibility for NITs professional development. It is important that NITs have a supportive work environment in order to transfer and build upon the knowledge, skills and attitudes, and continuous professional development must become the norm alongside teaching, not an activity to be 'filled in' when and if the pressure of the job allows.

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Appendix
Interview questionnaire for NITs

Relationship dimension

Professional responsibilities

1. Are you always regular?
2. Are you always punctual?
3. Do you know all school rules and policies?
4. Do you adhere to all school policies?
5. To what extent you are committed to your job and how? (Explain in detail)
6. Are you satisfied with the physical environment of the school? Why?

Cooperation with colleagues

1. Do you feel that school environment is friendly enough to work? Why?
2. What are the supporting factors in the school environment?

3. How much your colleagues are friendly and supportive of one another?

Stakeholders' support

1. What kind of professional support do you get from the stakeholders
   - Principal
   - Vice Principal
   - Senior Teachers
   - Trained Teachers
2. Do the seniors expect you to bring about changes in your exciting practices? What help does they provide you?
3. Does the school management shares all policies /changes with you?
4. Is there any mechanism which promotes the environment of cooperation among the junior and senior staff members?

Personal development dimension

1. Do you have autonomy in making decisions in terms of eg using resources, activities, planning and exchanging periods etc?
2. Do the stakeholders allow /encourage you to make your own decisions? (State examples)
3. What role does your senior/peer play in your Personal and Professional growth?
4. What challenges do you face in your school environment to grow personally and professionally?

Curriculum dimension

1. Who makes syllabus and how?
2. Who does lesson planning?
3. What resources do you use for planning?
4. How do you assess students?
5. In your opinion, what is more important STUDENTS'LEARNING or COMPLETION Of SYLLABUS? Justify your answer

Interview questionnaire for senior / peer teachers

1. Are you satisfied with your school environment? Yes/No? Why?

2. What are the supporting factors which are helping you in your personal and professional growth?
3. What opportunities the school provides you to apply your learning from AKU-IED in your school context?
4. Are you made responsible to provide professional support to the newly inducted teachers? What kind of support do you provide them?
5. How do you provide them support? What is the mechanism?
6. What challenges you face in this regard? How do you overcome them?
7. Do you have further possibilities to grow professionally?
8. What challenges do you face in supporting the teachers?
9. What changes you noticed among the NITs?

TEACHER EMPOWERMENT

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Abstract

Literature reveals that "teacher empowerment" (to become an active decision-maker) is considered a key element in successful school reforms. Despite the many educational reforms that have been executed in Pakistan, limited work has been done for teacher empowerment; as a result, the expected outcomes were not achieved. To facilitate the teacher empowerment process, the Aga Khan University-Institute for Educational Development (AKU-IED) under USAID Project-III, planned and implemented a series of professional development programmes for rural and suburban teachers from Non-Governmental Organizations and Community-Based Organizations (NGOs and CBOs) working in the education sector of Sindh.

The focus of these programmes was on teacher empowerment strategies, which have been addressed in the areas of curricular content, teaching methods, teacher education, inter and intra personal skills, and having a say in the setting of school policy. These professional programmes helped teachers to develop themselves as decision makers in curriculum setting, work with colleagues, involve parents in school activities, bring into practice newly acquired applicable knowledge and skill in their classes in order to trigger a positive change in the teaching and learning process, taking into account their contextual realities.

During follow-up visits and workshops, the team found that a majority of NGOs has assigned significant roles to graduates from AKU-IED as they proved to be successful teachers with notable decision-making capabilities.

This presentation discusses the initial achievements of strategies included in the offered programmes alongside paying specific attention to the progress made by the participants and its implications in the areas mentioned earlier on.

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Introduction

The term "empowerment" originated in written form in the year 1645 and it means to authorize or to license (Grimnet, 1994). It means that somebody empowers someone else by imparting specific knowledge and skills that allow that person to work within the existing system. In recent years, progressive educators have been promoting the "empowerment" approach to education so that teachers may benefit from it. The term empowerment however has been a non-starter in Pakistan. Since the term 'empowerment' is normally misinterpreted as 'might' or 'strength', it entails an element of opposition from the non-teaching sector. Due to this, many traditional societies in Pakistan have responded negatively towards any programme or project that is bases itself on the empowerment approach. Therefore people need to understand the actual semantics underlying this term.

The feeling of inner strength can be described perfectly by using the term "empowerment", which can be derived from the verbs to enable, to allow or to permit. Extending this concept further by empirically grounding it within education, Short and Rinehart (1992) constructed six dimensions in this concept: (a) decision making (b) professional growth (c) status (d) self efficacy (e) autonomy and (f) impact. Accordingly teachers must not only have the means to make change, but believe that their efforts can make a difference (Short & Greer, 1993).

By keeping in mind this situation, there arises a need to develop a variety of appropriate programmes, which will serve to empower teachers, especially those that function in primary education sector. So the Aga Khan Foundation, Pakistan (AKF,P) launched a project titled 'Pakistan Non-Government Initiatives' (PNI) with an aim to enhance the capacity of NGOs/CBOs to promote pre-primary and primary education in general and girls education in particular, in rural and semi-urban areas. Realizing the need for strengthening NGOs/CBOs' capacity building in the area of primary education, United States Agency for International Development (USAID) provided some financial assistance to AKF, P for the PNI Phase - II initiatives in 1999. These initiatives comprised four projects:

1) Improvement of pre-primary and primary education in rural Sindh
2) Development of NGO/CBO partnership and outreach
3) Strengthening NGOs/CBOs' capacity in education
4) Documentation of more popular practices and lessons learned in the areas of community management, financing of education, and policy advocacy. The Aga Khan Education

Services, Pakistan (AKES, P) managed the first two projects, whereas the Aga Khan University, Institute for Educational Development (AKU-IED) dealt with projects iii and iv.

The Project - III had on its agenda four main objectives:

- To build upon the successful works of NGO's/CBOs' in rural Sindh;
- To provide management training to head teachers, community management personnel, and NGO/CBO staff;
- To provide follow-up support to teachers and others;
- To develop the capacity among NGO/CBO members to monitor and document the progress of NGO/CBO educational initiatives in a better fashion.

Strategies applied

Following are the strategies applied by USAID Project - III in order to empower teachers:

Certificates in Education; Primary Education Programme

The overall aim of the Certificate in Education; Primary Education Programme was to develop participants as effective and reflective teachers enabling them to improve the quality of education in their context. The aim was to better the teachers' content knowledge, enhance pedagogical skills, classroom management and students' assessment strategies within the framework of rural education, and eventually strengthen the capacity of NGOs/CBOs. The course content was based upon a 'thematic and integrated' approach with innovative instructional strategies. In addition to this, the participants were expected to enhance their knowledge and skills of building a sound relationship between school and community for promotion of education,

Advanced Diploma in Education; Primary Education Programme

This programme was designed as a one-year field-based programme for NGOs/CBOs primary schoolteachers who completed successfully the AKU-IED Certificate in Education: Primary Education. The programme was modular-based containing 400 contact hours (210 contact hours for classroom and 190 contact hours for practicum). The overall aim of the programme was to develop the participants' pedagogical content knowledge enabling them to teach more effectively in their classrooms and further provide professional support to colleagues in their respective schools. The programme also developed the participants as 'academic leaders' for taking on leadership roles in organizing and

conducting professional development activities for teachers and others at Learning Resource Centres (LRCs). This programme contributed towards enhancing institutional capacity of their respective NGOs and CBOs.

Follow-up visits

The programmes have been designed as such to make them context-driven coupled with an action research approach in which the participants are required to work in their context to practice and reflect upon newly acquired knowledge and skills. During follow up visits, the AKU-IED professional development team visited each participant individually while they were working in their classroom and collectively at their Learning Resource Center (LRC). The AKU-IED graduates were expected to place a foundation stone for establishing an LRC for NGO and CBO cluster schools working collectively as a team. For such visits the professional development team had to document their experiences and opinions. The AKU-IED team supports the graduates thus:

- to encourage the course participants to implement and reflect on new knowledge and skills in their context;
- to develop course participants confidence by applying new skills and competence of conducting programmes and applying them in their own context;
- to facilitate the course participants in minimizing the challenges faced by them and to develop alternative mechanisms for the effective implementation of new ideas;
- to initiate in their new role as a resource person for their and cluster schools;
- to develop understanding of their new role of academic leadership; and
- to document field experiences and share their experiences with other colleagues.

Initial achievements

In order to enhance the NGOs and CBOs' capacity, the professional development of seventy-five teachers was envisaged in the project as a target, but considering the requirement of NGOs/CBOs, 210 (54 Males and 156 Females) primary schoolteachers from the seven Certificates in Education: Primary Education Programmes and 32 (11 Males and 21 Females) from two Advanced Diploma in Education: Primary Education Programme were professionally developed. At present all these graduates are empowered in their roles and working successfully in their respective schools.

The programmes offered by AKU-IED assists their participants in mentally preparing themselves to think about the problems, so that they may arrive at a suitable decision.

It was kept into consideration that the empowerment as authorize or to license is a life-long process, which requires ability of decision-making. In this process as substantiated in Bacchus (1996) and Nias (1989), the teachers/professionals have to think critically, argue, compare, contrast and eventually come to a consensus.

In order to empower teachers, the programme gave more emphases on the following roles:

Empowerment in pedagogical content knowledge

One of the main objectives of the programme was to emphasize on the enhancement of pedagogical content knowledge of the participants. Since the intention was focused on developing participants as effective teachers, the activities were planned to enhance their pedagogical content knowledge in all subject areas such as Language, Social Studies, Mathematics and Science. The course participants justified their thinking, and at the end they developed a deeper understanding of the subjects. Their lesson plans and observation checklists of teaching practices provide substantial evidence in this regard. The activities that they developed during the programme affirmed their conceptual development. The innovative instructional strategies that they were exposed to had a consequential impact on their teaching. One of the participants advocated the same viewpoint, "The hands-on, minds-on activities provide the students with opportunities of getting involved into the process through which they can develop their understanding not by rote learning but by doing". Therefore several methods and strategies for imparting knowledge in the above-mentioned subjects were introduced to the class as, reported in Gudmondsdottir (1990), "The 'special amalgam' of pedagogy and content made them realize the importance of different aspects of the interactive teaching process."

Empowerment in working with colleagues

Facts reveal that normally teachers do not allow colleagues into their classrooms during the course of teaching session and prefer to remain isolated without sharing and providing professional support to one and other due to many reasons that need to be explored. Research literature on school culture and staff development i.e. Hargreaves & Dawes (1990), have highlighted the importance of releasing teachers from their isolation by "cracking the walls of privatism" and emphasized collaboration among the teachers for their professional development. Therefore, it was emphasized during the programmes that the participants should go through a process by which they could practice what they have acquired in a congenial environment. The intent was to make them realize that

collaboration is a fundamental aspect of developing a professional culture in schools. While implementing guided tasks, the course participants were observed to be supporting each other and offering suggestions, imparting and receiving constructive qualitative feedback and sharing concerns with each other. The experience of working in such an environment has helped them in working with their colleagues in their schools, as one of the graduates reflects:

After the programme, for the first time in my life I was learning about teaching in different ways, I learned how to take observations and provide feedback to and facilitate our colleagues; at that time there was a feeling of authority. Authority in the sense that we now knew more than our colleagues did about pedagogy because we were provided with the opportunity to explore new dimensions to teaching by way of debate now I can share with them my experiences and what I have learnt.

To hear a teacher speak with such enthusiasm about the feelings of empowerment and authority she had over other teachers was quite significant in indicating how the programme effectively changed her self-image as an educator.

Empowering teachers to deal with parents

These programmes assisted teachers in authorizing the involvement of parents in the school; this practice accelerated a positive change in the progress of a child as one of the graduates reflected:

> When the charge was initially in the hands of the management, I requested them to call parent-teacher meetings in the school but nobody listened to me. However after attending the programme, when management gave me the authority, I allowed parents to discuss everything regarding their child. When I started involving parents in school activities and shared the success and challenges of their children, I noted the obvious change in the progress of students.

Literature on this subject reveals that children's achievement /education in primary school is enhanced if parents meet with the expectations that they are faced with and have a positive attitude towards education and if they encourage and support their children (Ceroni, 1994).

Empowerment as in having a say in setting school policies

The programme helped the participants in presenting their views confidently in front of those that helped them, how to value others' ideas and suggest their own views in an amiable manner such that the management or others may agree with them, as specifically highlighted in Harris, J. M. (1995) that, "Good preparation is the secret of a successful presentation". (p.84) The participants applied their interpersonal and intrapersonal skills while working on different tasks. They also helped each other in enquiring and responding to critical questions. These activities developed their communication skills and built their confidence in handling the responses and having a say in setting school policies. One of the graduates had the subsequent reflection; he shared the reflection during the follow-up visit as below:

> Initially when I was in school before the programme, I had many ideas but did not have the skill to convey my message and I could not even speak with or respond to anyone in the staff room, as a result of which I was terrified and depressed. But now I can safely say that my confidence levels have increased, and even if not very fluently, I can convey my message more effectively without getting terrifiedor feeling shy, that is I feel more certain in my views after having completed this programme It has developed my communication skills immensely as well as enhanced my self-confidence. In addition, due to possessing an effective background knowledge of school management and policies, the school's administrative body was more receptive to the ideas I had to offer.

The Story of an Initial Impact of Teacher Empowerment:
Ms. NS (NGO - Naz Old Boys Welfare Association)

Ms. NS, an educational promoter is 27 years old working at Naz Old Welfare Association, Khairpur. She is a post-graduate with a 5-year experience in primary education. She successfully completed her Certificate in Education: Primary Education Programme in 2001 and Advanced Diploma in Primary Education Programme in 2002. She has grown as an academic leader at her NGO. About her learning she said:

> …before coming to AKU-IED, I had sufficient content knowledge and an understanding about the concepts of teaching and learning but I was somehow unclear about my roles and responsibilities as a teacher and was unfamiliar with the issues related to community education, quality

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education. I used to converse rudely and did not listen to other fellow teachers' ideas and opinions. After attending the programmes, I felt a tremendous improvement in my teaching style. I acquired a wider range and depth of the relevant content and different concepts and came up with important links between those concepts, activities and strategies. Because of my command over the content aspect, my pedagogical skills also improved. I can now tackle students' questions more confidently and employ creativity in the classroom and during the NGO Access Programme and workshops. It greatly pleases me to know [that] my attitude has totally changed. I have started treating teachers more politely and impart rightly deserved respect to colleagues' ideas and solving their problems collaboratively. I am an educational promoter; I have changed my perception of quality education. I think more about the students' learning rather than keep a record of their attendance and mark their daily diaries. I make better presentations in the Parents Education Committee (PEC) because I am more confident and I have developed the habit of prioritizing my focus areas and using the problem solving process, which I learnt at AKU-IED.

Challenges

- Some of the participants had lacked enough content knowledge and had many misconceptions. Therefore most of the time was spent elucidating concepts at the very basic level.
- Some of the participants of rural Sindh felt a little uneasy conveying their ideas and thoughts in Urdu. Sometimes, we had to slow down our pace due to the language constraints. Perhaps they needed time to understand the written material and to internalize the teaching-learning concepts.
- Some of the stakeholders of NGOs did not did not welcome any interventions in their policies and felt they would be deprived of their right to make decisions in case of alien involvement.

Lessons learnt

- Mutual trust and respect between NGOs/CBOs and AKU-IED helped both ends to understand each other's perspectives, thus developing a favorable rapport.

- Field visits helped develop increased positive interaction between AKU-IED, NGO/CBOs and their schools. This also helped the participants to keep their morale high while implementing new ideas.
- Positive collaboration among the NGOs/CBOs as well as participants provided all CPs with the opportunity to share expertise and resources in order to accomplish common goals. This allowed CPs to visit each other's schools and start providing support in conducting professional developmental activities.
- Concerted efforts made by NGOs/CBOs and AKU-IED to create an environment for sharing resources and ideas may lead towards NGO networking.

Conclusion

The USAID Project -III aimed to develop an environment in which teachers are urged to act as professionals and are treated as professionals who have the freedom to make decisions. AKU-IED emphasizes collaboration and a feeling of togetherness thereby complementing all IED graduates to work towards local empowerment, sustainability and an intricate network within the NGO/CBO sphere.

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SCHOOL IMPROVEMENT - INNOVATIVE PRACTICES AND EXPERIENCES

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Abstract

This paper reflects field experiences in setting up and running the Academic Cell and the Model Teachers Resource Centre. The paper is based on work done in April 2001 up to August 2003. As a Professional Development Teacher (PDT), school improvement has been the core objective for me. This paper points out to the contributions made for the purpose of school improvement and curriculum enrichment through material development, , which focuses on developing two main areas: firstly, a Guide for Low Cost Teaching Aids and secondly, textbooks and corresponding Teacher's Guides. Also, it discusses the procedures that were adopted in setting up a model Teacher's Resource Centre. The fact that this centre functioned as backup for the Academic Cell's activities and also as a source of facilitation for district based Teacher's Resource Centres has also been elaborated on. It was found that material developing is a lengthy and complex process and requires detailed knowledge of a particular subject and the ability to clearly and effectively communicate with an audience.

There are certain criteria that need to be considered in developing textbooks such as:
1) Textbooks must address the objectives of the National Curriculum.
2) The content and language should be appropriate enough in making a smooth transition from the previous level to the one that is aimed at.
3) The content must provide to students with room for creativity.
4) The presentation has to be engaging and interesting. For this purpose, an appropriate ratio of text and illustration needs to be considered. Gender balance and cultural appropriateness must also be addressed.

As part of my responsibilities I was also involved with the development of Indicators for Monitoring and Supporting Schools. It is hoped that this document will play a significant role in making judgments based on evidence whether schools are progressing or not.

I also worked towards setting standards for quality education in colleges through teaching, arranging workshops, making lists of teaching and learning material plus library books all of which play a vital role in achieving that purpose.

I learnt that within their scope of work, Professional Development Teachers can make a big difference by providing opportunities for school improvement. In doing this however the system needed to be thoroughly understood and a personal commitment also counted.

Introduction

I started my career as a Secondary school teacher in February 1987. In 1998 I was selected for the Masters programme by AKU-IED for the academic session 1998-2000. The Department for International Development (DFID) sponsored my degree through Northern Areas Education Project (NAEP). After completing my studies and conducting the Visiting Teachers' Programme, I joined the Department of Education and was deputed as Manager Academic Cell to work with NAEP as a Consultant in the "Improvement of Quality of Education" component of the project.

The Department of Education established the Academic Cell in May 2002, with technical support from NAEP. The prime functions of the Academic Cell were to develop educational material to support the quality components (Curriculum and Material Development, Teacher Training, Assessment and Testing). The material developed will be published at the Desktop Publishing Unit, the Directorate of Education. The cell would also conduct research studies with an aim to identify the needs of teachers and students and develop supplementary material to enrich the curriculum.

It was decided to equip the Academic Cell with personnel from the existing cadre of teachers. A trainee writer, an illustrator and a designer were collectively identified following this decision. The NAEP consultants trained these selected personnel in computing and illustration skills.

Role and responsibilities as 'Manager Academic Cell'

As Manager of the Academic Cell, my prime responsibilities include managing a team of professionals and assisting the AD Curriculum in developing educational material, textbooks and teachers guides for primary classes planned under the Northern Education

Project. I also assisted the AD Teacher Training in organizing training programmes for educators and the AD Assessment in developing competencies and achievement tests for primary classes. In addition to these activities, I undertake any other responsibility assigned by the Department of Education such as writing different memos, briefs, presentations, proposals and reports for the department.

Following is my field experience and learning on the basis of these interventions. As a PDT so far, I have contributed to curriculum-development and setting up a Model Teachers Resource Centre. I would like to add that the area of Curriculum Development was a role assigned to me by the Department of Education, whereas the setting up a Model Resource Centre at the Northern Area level has been an initiative that Huma Mirza and I share.

Materials development for curriculum enrichment

I worked closely with NAEP, the National and International Consultant, in developing the educational material.

Guide on low cost/no cost teaching aids

In 2001, the task assigned to me by the Education Department was to contribute to developing a guide on Low Cost Teaching Aids for primary classes. The guide was already going through the developmental phase. The short-term NAEP, National Consultant held meetings to familiarize me with the nature of this venture.

We also had several meetings with aims to discuss the content illustration and design elements of the guide. We developed, reviewed and edited and prepared lessons and came up with camera-ready Copy. This document was printed and then distributed to all Northern Areas primary schools.

Learning

Developing the guide was a great opportunity for me to reflect upon and transfer what I learnt at IED. Most of the time, I referred back to different modules and specially Science where we used to collect different items for composing and using teaching and learning material. My experiences as a teacher and teacher educator going through the M. Ed Course has tremendously helped me in incorporating gained knowledge with developing material with an aim to make the guide more practical and relevant to primary

level requirements. Through this guide, I tried to share with primary school teachers the development and use of material in a wider context.

In May 2002, during a workshop in Islamabad with NAEP, National / International Consultants, we piloted all the elements and activities to audit their practicality. Later in Gilgit, we replicated the same workshop with Master Trainers selected from schools in the government and private sectors. In the near future we also plan to organize cluster-based training through the appointed Master Trainers to educate primary school teachers about the use of low cost / no cost teaching aids, so that the end beneficiaries, the children, can collectively benefit from all these efforts. The purpose is to enable teachers to form and use teaching / learning aids to make its process more child-centred and interactive rather than anything else.

The development of a textbook and teacher's guide

I have contributed in developing textbooks for the primary level through reviewing and editing integrated books for class two and three with teachers' guides. These books are more culturally and environmentally amiable especially with lower primary requirements has been appreciated by its users (teachers and students).

Learning

This provided me with a chance to incorporate knowledge with making these more child-centred and teacher-friendly. During my studies at IED, while studying different modules, especially in the subject of Social Studies, we were involved in reviewing textbooks and matching them with the National Curriculum to identify gaps and ways to enrich the prevailing content. In the Social Studies module we were also assigned the task of developing a chapter and a chapter guide for teachers. That exercise really paid off during developing materials for Textbooks and Teacher Guides.

It was also a great opportunity for me to work with professionals such as Huma Mirza, who have vast experience in this field.

In the Northern Areas, a team of part-time local writers was working with the NAEP, National/International Consultants on this project. The manuscripts produced by these writers required huge editorial inputs to make it adequate in terms of content, language and level.

Conclusions

Writing textbooks is a complex task, and requires detailed knowledge of the subject and an ability to communicate clearly and effectively with the audience.

Textbooks are an important part of most learning programmes irrespective of subject or level. Studies conducted in developing countries indicate that teachers rely heavily on textbooks because of a lack of adequate training or because their own tutelage is restricted to a basic level. It has become extremely important to ensure that the books produced should be aligned with the standards, which can be achieved by adopting standard procedures of textbook development.

From my field experience in the Northern Areas and the tour I had to the Oxford University Press and Open University in the UK, I found by way of analysis, that certain criteria need to be considered in developing textbooks such as: textbooks must address the objectives of the National Curriculum. The content and language are appropriate to the level for which it is intended and progression is made from previous level. The content provides creative and imaginative opportunities to the students. The presentation is attractive and interesting, and an appropriate ratio of text and illustration is considered. Gender balance is addressed and culturally appropriateness is focused. Activities and exercises stimulate observation and critical thinking.

School improvement: quality indicators for monitoring and supporting schools

I have also contributed in developing the draft of quality indicators for monitoring and supporting schools. The Education Department Authority, which include Assistant Education Officers (AEOs) and District Inspectors Schools (DIS), uses these indicators for monitoring and supporting schools. These Quality Indicators have been developed with a working group comprising of senior officials from the Education Department along with international and national consultants. These Indicators are now in the piloting stage and will be geared for implementation within the project period's time-frame. The document focuses on the five basic elements that constitute an effective school (Leadership and Management, Community and Parental Involvement, Teachers, Students and School Environment).

Learning/Issues

Indicators or standard measures help us in consistently calibrating practices and in

measuring progress over time and provide reliable and consistent information about the improvement in schools.

Studying the School Improvement Module helped me tremendously in developing indicators for monitoring and supporting schools. It was a chance for me to retrospect the discussions we had regarding effective school and school improvement.

A lot of effort was put into developing a skeleton draft for quality indicators. There was a need to address issues such as: potential users, the monitoring systems' perpetuation and how the information acquired would be useful reaching effective conclusions.

Conclusion

Indicators or standard measures help us in making a fair judgment on whether schools are effectively progressing or not and deciding on taking further steps towards School Development.

Sustaining the academic cell activities

Academic Cell Activities such as material development and teacher training were part of the Northern Education Project (NEP). The NEP was to conclude in June 2003, and NAEP in December 2003. This project's main concern was to sustain the Academic Cell Activities. A big hall at the Academic Cell was used as a Multi-Purpose Resource Centre. This room was equipped with appropriate teaching/ learning material. The NAEP Consultants and Government officials have used this Resource Centre for training purposes ever since the inception of the project but there was no provision special of a regular government budget for sustaining these activities.

With the passage of time the issue of sustaining the Academic Cell brought forth the idea of linking it with any government funded activity/association i.e. Teachers' Resource Centre under the Education Sector Reform (ESR) Programme.

Background: Academic Cell's conversion to a model Teachers' Resource Centre

In the financial year of 2001-2, the Government of Pakistan introduced the ESR Programme. This programme aims at increased access, enhanced equity and an improved quality of education. There are seven components of the ESR programme and one of these is the Teachers' Resource Centres.

The functions of Teachers Resource Centres (TRCs) are as follows:
- rovision of training and information facilities at the decentralized level;
- provision of venue and resources for professional development of teachers and education managers and;
- establishment of linkages with other professional institutions.

The Education Sector Reform Programme was implemented in the Northern Areas during the year 2002-03. A total of 6.329 million rupees was invested in establishing10 Resource Centres across the Northern Areas. Even though these TRCs have been equipped no activities have been planned or initiated so far. This shortcoming can be attributed to the modernity, which takes a little time to settle down. Therefore, the main issue that emerged indicated towards providing clear objectives, regular directives and appropriate human resources, establishing professional linkages between the centres within the area and at the national level. There were several solutions to these issues and one way forward was establishing a Model Teachers' Resource Centres at a regional level, keeping in mind the Northern Areas.

With support from Huma Mirza, NAEP, Material Development Consultant, I came up with a proposal focusing on setting up a Model Teachers' Resource Centre at the Academic Cell. The Secretary of Education, Northern Areas approved it and sanctioned funds under the ESR budget. After talks with relevant authorities, it was decided that the Academic Cell be renamed as Model Teachers' Resource Centre.

The effort of setting up a Model Resource Centre also reflects the insight I had gained from the UK study tour, which was arranged by DFID through NAEP for the senior education officers. The core purpose of this tour focused on Raising Schools - Improving Standards held from 10 November to the 1st of December 2002. During the visit, we had the opportunity to visit the Teachers Resource Centres (arranged by International Consultant, NAEP, Roger Pedler), and observe and learn from their experiences and emulate them as much as possible.

Functions of MTRC

- One of the main functions of TRC is facilitating district-based Teachers Resource Centres in consultation with DDE Offices
- Identifying appropriate teachers and appointing them as the In-charge of their respective Teachers' Resource Centres
- Managing the TRCs, setting up, developing a calendar of activities

- Executing training courses and developing related manuals

We hope that through the setting up a Model Resource Centre, we can contribute more towards school improvement through training and arranging theme-based activities and exhibitions for teachers and students alike.

Management of TRCs

- The Resource Centres should be properly setup and equipped for training. Material should be carefully chosen to support teaching and learning including reference books. Attention must be paid to the display and storage of material so that the centres look attractive and well-organized.
- A well-trained, committed staff should be available at the TRCs to impart teachers with advice, offer courses in response to National Curriculum and respond to requests from schools and the Department(s) of Education. Easy access to teachers (not too many rules and regulations), open to students, teachers and community.

From the 6th to the -8th August 2003, we arranged a three-day orientation workshop at the MTRC, Gilgit for teachers from district TRCs in order to familiarize them with the basic agenda of TRCs, their role and responsibilities and developing a calendar / schedule of activities and training courses. As a follow up we have planned to visit their respective districts TRCs and provide them with support and guidance in setting up the TRCs. From personal experience, I learnt that one learns more through arranging and conducting workshops. It is a reflective and two-way process. Moreover, the workshop also provided a forum for identifying basic requirements and discussing issues and questions, which teachers wanted to address.

It is now important that the trained staff is given maximum the opportunity to utilize their newly gained knowledge to render the TRCs functional. The support and guidance of respective head teachers and Deputy Directors are crucial for a smooth running of the TRCs. It was also observed that the concerned higher authorities needed to give more thought to appointing teachers to run district TRCs.

Conclusion

1. There is a need to make best of the different resources available, such as NEP, ESR /EFA and government regular budget

2. All stakeholders should have a common understanding about the role of TRCs
3. TRCs need to be staffed by enthusiastic 'change agents' who should have clearly defined roles and responsibilities
4. Long-term financial stability is crucial for sustaining the activities and developing the TRC
5. Need to develop links with other TRCs, and agencies at National and International level for capacity building and strengthening TRCs
6. Teachers' Resource Centres serve as a driving force for School Improvement

Contribution to strengthening the Colleges of Education

Teacher Training colleges play a vital role in delivering pre-service and in-service trainings. In the academic year 2001-2002, I too, taught Educational Psychology (one of the core subjects) on the B. Ed (Bachelors in Education) level at the Elementary College of Education. The result that was announced in May 2003 by the Punjab University was 64% and the outcome in that particular subject was 100%.

Apart from teaching, I also conducted workshops for trainee teachers on lesson planning with special focus on writing SMART objectives and developing and using the teaching aids. As a result, I got requests from private schools to conduct workshops for their teachers but due to a tight working schedule, I could not manage it. However, on frequent requests, I conducted sessions on lesson planning, developing teaching /learning material and classroom management for teachers, master trainers and AEOs in different workshops arranged by NAEP consultant and Education Department officials.

Under the Northern Education Project, it was planned to construct two Elementary Colleges for women in the districts of Skardu and Gilgit. Due to low enrolment, the World Bank refused to provide an NOC for its construction. The reason for low enrolment was the admission policy of the Federal Board as the project was affiliated with it. I developed a proposal with justification to make some amendments in admission policy because since 2001, the Directorate of Education, Northern Areas, was responsible for conducting PTC (Primary Teaching Certificate) and CT (Certificate in Teaching) examinations. The Secretary Education approved it.

The following chart shows the enrolment in Elementary College of education for Women, Gilgit since 1999.

S. No	Academic Year	B. Ed	CT	PTC
1	1999-2000	07	19	09
2	2000-2001	11	16	10
3	2001-2002	15	43	30
4	2002-2003	19	55	33

The chart above shows that the enrolment has risen in the Academic years 2001-2 and 2002-3.

In addition, I worked with the Senior Account Officer NEP (Education Department) in 2001, to develop a detailed Justification Report for the World Bank focusing on the importance of college-building to enhance opportunities for the professional development of female teachers. The report and our efforts were appreciated by the World Bank team but due to protracted government procedures and severe weather conditions, the time for construction was not considered enough (it should have been completed by 30th June 2003). However, now senior government officials are concerned about the college-building and raise this issue at different forums.

To strengthen the newly constructed building in Skardu and the existing colleges of Education (female and male) in Gilgit, under NEP, it was decided to provide computers, equipment, teaching /learning material and library books etc. The department assigned the task of conducting a needs analysis based on the college's requirements to me and I submitted detailed lists of the above-mentioned items for three different colleges. It was a huge task and time was short. I requested NAEP for technical support through its Project Director. With a short-term consultant (11 days) I developed the required list and handed it over to the department. I prepared the revised lists based on feedback from my colleagues. It was a big challenge for me.

Conclusion

From this experience, I learnt that we could get any task from the department according to the situation, even on very short notice. I prepared myself mentally to be alert for challenges coming my way. On the other hand, I maintain that the concerned authorities need to properly plan everything beforehand.

I am content with the fact that my efforts have made a genuine impact in strengthening

areas of teacher training, provision of library books in colleges, teaching/learning materials, which play a vital role in improving teaching and learning and contribute to the quality of education.

Reflection

According to the scope of work, Professional Development Teachers can contribute towards school improvement and make a difference according to their job and responsibilities and opportunities for contributing towards school improvement. However, the important point is understating of the system and personal commitment in making that difference. I would like to share one such example during the UK study tour. At the end of the tour we were asked to develop an action plan. My focus for the action plan was strengthening the TRCs established under the ESR Programme. When I came back to the Northern Areas, I shared opinions with colleagues. With the support of Huma Mirza, National Consultant for Material Development, NAEP, we developed a proposal focusing on strengthening Teachers' Resource Centres and setting up a Model Teachers Resource Centre at the Academic Cell. The Education Department authorities and Chief Technical Advisor, NAEP and International Consultants appreciated this effort. I am quoting the remarks of an International Consultant who arranged the visit to TRCs at UK. He says that "[Mehr un nisa] On her return to the UK, she has worked hard to improve and develop the Academic Cell in Gilgit and to set up the new Model Teachers' Resource Centre. It has been largely due to her efforts that the MTRC has been founded and funds arranged"

I feel proud that due to initiatives taken by myself, the ten highly equipped district based Teachers' Resource Centres were given a chance to come out of their shells where they lay dormant for the last fifteen months; to play an active role in improving teaching and learning at the school level (Note: I also have the copies of participants reflection about the training)

In my opinion, it is extremely important that we get support and encouragement combined, which is the main propellant for our work to move forward. We can make a difference no matter where we are and we can contribute towards school improvement in more ways than one. This is our goal. We need to have a clear vision and proper planning, to seek opportunities to develop our professional and personal selves. Our continuous effort, hard work will make a difference. The practicality and the reality behind workplaces are not as smooth as they look. There are many challenges, especially for females, who are working and trying to make a difference. I always treasure the words of my tutors in that

life is not easy and we need to be patient. These words helped me give a practical shape to all the things I wanted to achieve during my work.

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ENHANCING INSTITUTIONAL CAPACITY BUILDING OF NON-GOVERNMENTAL ORGANIZATIONS (NGOS) AND COMMUNITY BASED ORGANIZATIONS (CBOS): IMPACT OF AN INNOVATIVE INITIATIVE

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Abstract

This paper attempts to unpack the notion and process of institutional capacity building of NGOs / CBOs in rural and semi-urban areas if the Sindh province. Several NGOs / CBOs and other organizations tend to take initiatives embedded in the 'first order' changes which are of incremental nature and have failed to contribute substantially towards enhancing their institutional capacity building. In 1999, the AKU-IED was engaged in enhancing institutional capacity building of selected NGOs and CBOs in Sindh through 'second order' changes for promoting education in general and female education in particular.

The process of the transformational development of these NGOs / CBOs began in October 1999 through the participation of their staff members in various contextualized Professional Development Programmes at AKU-IED directed at initiating 'second order' changes. The focus of these programmes was to develop and promote an academic leadership and collaborative culture among the participants so that they are able to demonstrate themselves as a 'community of learners' in their own contexts. These programmes eventually contributed towards enhancing the institutional capacity building of NGOs / CBOs for managing the 'second order' changes in their contexts.

Within three years, these NGOs / CBOs conceived and provided contextually viable and financially feasible professional platform in the shape of Learning Resource Centres (LRCs) for their teachers and others continuing professional development. Sixteen LRCs were established by the respective NGOs / CBOs. These are functioning effectively with the minimum resources.

Although, these LRCs are small in their nature and size, their impact for building institutional capacity has been found quite substantial. This innovation has led to develop

an indigenous model of professional development of teachers and others that can be easily replicated in the similar contexts of Pakistan. This paper further discusses the role and impact of LRCs in relation to institutional capacity building of NGOs / CBOs in Sindh. These LRCs have developed innovative and relevant Professional Development Programmes for their staff and others to provide access for professional development at grass-roots level which eventually improve the quality of education to a great extent.

Introduction

Successive Governments in Pakistan have grappled with the issue of qualitative and quantitative improvement of education in the country because of prevailing low enrolment and retention rates, high dropout rates, irrelevant curriculum and ineffective assessment fostering rote learning, ineffective teacher education, poorly managed schools and poor quality of primary education. The Mid-Term Evaluation Report of PNI-Phase -II (2001) mentions that "only 33% of Pakistani children attending fifth grade can read with comprehension, only 17% can write letter using simple grammar and vocabulary, and the average years of schooling is under two" (p. 4). Hence, the state of education in Pakistan is considered to be the poorest within South Asia (Aga Khan Foundation, 1998). Several reforms were launched by the Government of Pakistan to raise standards of education through a "top-down" approach (Fullan, 1999) without clarity on focus, purpose, framework, strategies and desired outcomes. Teachers were considered as problems rather than parts of solution.

As a result, this approach created disillusionment, demoralization, and disempowerment among teachers (Myers & MacBeath, 2002). Hence, there is a need for adopting a "bottom-up" approach embedded in human resources perspective for building institutional capacity. In the late 1990s, the Government of Pakistan recognized the role of community participation in the development of education. Thus, community participation became a major thrust of Government plans and programmes such as Social Action Programme (SAP) Phase I (1992-1996) and II (1997-2002) and the Education Sector Reform (2001-2004). As a result, several NGOs and CBOs emerged as driving forces to take on a leadership role in the implementation of governmental initiatives at the grassroots level. However, many NGOs / CBOs seem to have suffered from the lack of adequate institutional capacity to manage the governmental, or their own educational initiatives effectively, at the grassroots level.

The Aga Khan Foundation, Pakistan (AKF,P) launched a project titled 'Pakistan Non-Government Initiatives' (PNI) with an aim to enhance the capacity of NGOs / CBOs for promoting the quality of preschool and primary education in general and girls' education, with particular focus on the rural and semi-urban areas of the Sindh province. Realizing the need for strengthening the NGOs / CBOs' capacity building in the area of primary education, the United States Agency for International Development (US-AID) provided some financial assistance to AKF,P for Phase II of the PNI initiatives in 1999. In this paper, the authors present an account of the impact of one of the initiatives: building NGOs / CBOs' capacity for improving primary education managed by AKU-IED.

This initiative contained the following objectives:

- to build upon the successful NGOs / CBOs' work in rural Sindh;
- to provide management training to head teachers, community management and NGO / CBO staff;
- to provide follow-up support for teachers and others; and,
- to develop capacity among NGO / CBO members to better monitor and document the progress of their educational initiatives.

Through a rigorous and transparent selection process, AKU-IED short-listed several NGOs and CBOs of which a final fourteen were selected. A comprehensive needs assessment was carried out through a survey questionnaire combined with a one day needs assessment workshop, followed by a focus group meeting. A validation process of the needs assessment was also carried out with NGOs and CBOs through the one-day workshop. Thus, AKU-IED established collaboration with fourteen NGOs / CBOs in rural and semi-urban areas of Sindh province to build their institutional capacity for promoting primary education.

Notion of capacity building

Literature on school improvement (e.g. Hopkins, 1987; Fullan, 1992; Fullan & Hargreaves, 1992; Mortimore, 2000; Stoll & Fink, 1996; Harris, 2002; Mitchell & Sackney, 2000) suggests varied approaches to school improvement for raising standards of Education. Harris (2002) argues that without capacity building there would be no real changes in schools. Varied notions of capacity building are described in the literature but there does not seem any agreement on its definition. However, capacity building has become pre-requisite for school improvement initiatives. Mitchell and Sackney (2000) describe three inert-related dimensions of capacity building: personal, interpersonal and organizational.

To them, personal capacity of individuals is built as a result of their reflection on classroom practices for improvement. Interpersonal capacity is developed through creation of collaborative learning environment to learn from each others experiences. Organizational capacity can be built through shared vision and leadership through empowerment of staff. According to Harris (2002), capacity building is "concerned with creating conditions, opportunities and experiences for development and mutual learning" (p. 2). She seems to agree with Mitchell and Sackney (2000) that capacity building requires fostering and development of collaborative processes through which individuals feel confident in their own capacity, in the capacity of their colleagues, and in the capacity of the school to promote professional development. She further adds that "schools generate the external capacity and build the internal capability for improvement" (p. 2). Sergiovanni (2000) considers capacity building as a crucial factor whereas Stoll (1999) considers internal capacity as power to change in and sustain continuous learning in schools. This suggests that there is no easy way of building capacity and a 'one size fits all' approach to capacity building will not work. Teachers and others in the 'community of learners' need to work together to build capacity for managing initiatives effectively.

A working definition of capacity building evolved as a result of the implementation of this initiative was to create and strengthen the internal conditions for the accomplishment of organizational vision and mission in effective ways (Memon & Mithani, 2003a and 2003b). Building upon this definition, a capacity building framework was developed based on strategic thinking and planning. They further identified a number of rubrics of capacity building which have been presented in the diagrambelow:

Diagram 1: Framework for Capacity Building

Capacity Building

Academic, Management & Strategic Leadership

Empowerment of community of learners

Organizational Development through building trust and ownership

Networking through collaboration
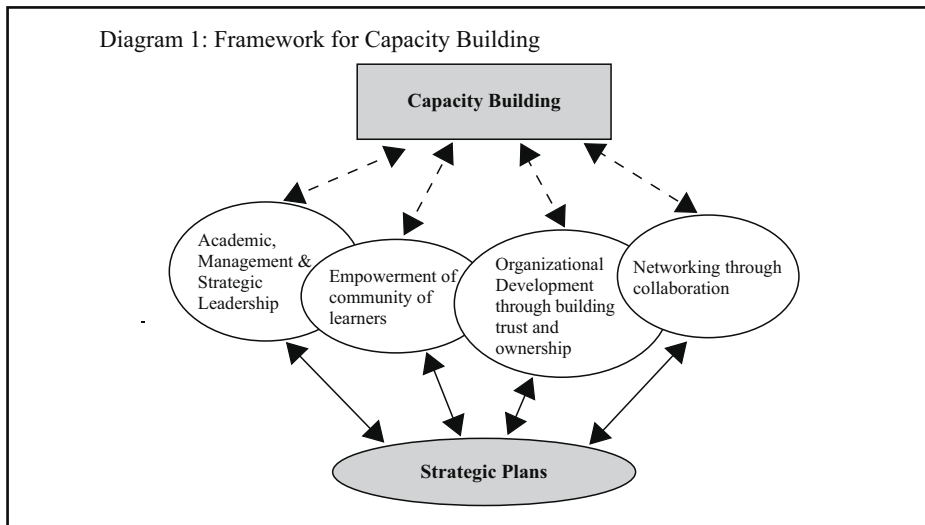
Strategic Plans

While building institutional capacity of these NGOs / CBOs, the following strategies were used:

- Strategic and operational planning
- Advocacy and community mobilization
- Effective management and leadership practices
- Pedagogical and curriculum enrichment
- Empowerment of female teachers and community leaders
- Social and reflective practices
- Enabling learning environment
- Programme and project development framework
- Collaboration and networking
- Human and finance resource development
- Programme monitoring and evaluation

These strategies did not only become critical towards programme implementation and follow-up but also served as indicators of measuring success of the initiative. One the most significant strategic outcomes of the initiative was the changing internal structure and processes for developing of Learning Resource Centres (LRCs) within the premises of centrally-located schools. Conventionally, this notion translates itself into a 'brick and mortar' structure but in this case, the centrally-located schools, based on a cluster approach, were transformed as LRCs making responsible for imparting education to children and providing professional development opportunities for teachers. Such models are labelled as 'Professional Development Schools' (Holmes Group, 1990), Professional Practice Schools (Levine cited in Byrd & McIntyre, 1999) and Teacher Resource Centres (Government of Pakistan, 2002).

Conceiving change for capacity building

Educational change cannot achieve its objectives through a linear process hence there is a need to explore alternatives for making change happen at the grass roots levels. The framework of the innovative initiative was guided by a set of principles enunciated by Fullan (1992) and Hoban (2002). To Fullan, change is a process rather than an event. To Hoban, educational change be viewed as a "complex system assuming that change is a non-linear process that needs to be supported by a framework for long term teacher learning" (p. XVIII). Fullan's (1991) change model provided the basic operational strategy to implement the programmatic activities. He suggested a four-step cyclic process: initiation, implementation, continuation and outcome, which helps to conceptualize

change as an integrated process for building capacity at the personal, interpersonal and organizational levels. The focus was on the 'second order' changes rather than the 'first order' changes which aimed at bringing about holistic improvement at the system level. The 'second order' changes seek to alter the fundamental ways in which organizations are put together including new goals, structures and roles. In contrast, the 'first order' changes, according to Cuban (1988), are "implemented without disturbing the basic organizational features, and without substantially altering the way that children and adults perform their roles" (p. 342). The distinction between the 'first order' and 'second order' changes is given below:

Table 1: Distinction between the first order and second order changes

First order change	Second order change
Focus is on present	Focus on past, present and future
Linear approach	Non-linear approach
Emphasis on product	Emphasis on process
Experts-driven change	Needs-driven change
Focus on "fix it"	"One size does not fit all"
Changes in basic organizational features are not required	Changes are required in organizational goals and structure
Single-loop learning approach	Double-loop learning approach
Emphasis on individual learning	Emphasis on collective learning

Literature on educational change and improvement suggests several strategies for change, however, multi-layered change strategies were used bearing in mind that 'one size does not fit all'. This allowed managing the change more effectively. Hence, change strategies varied from the context to context of each NGO and CBO. Harris (2002) argues that in order to build capacity for school improvement, change needs to be carefully planned. Initiating Innovative Programmes for Capacity BuildingIn line with diagnosed needs of fourteen NGOs / CBOs, a series of context-based Professional Development Programmes were developed. These included: a) Certificate in Education: Educational Leadership and Management; b) Certificate in Education: Primary Education; c) Advanced Diploma in Education: Primary Education; and d) Short Course on Monitoring, Evaluation and Documentation. Some participants also enrolled in the Master in Education (MEd) Programme. These programmes were responsive to the stakeholders' needs and demands

and therefore created lot of enthusiasm and interest among the NGOs / CBOs. These programmes mainly concentrated on creating capacity-building required for bringing about sustainable changes at three levels: individual, inter-personal and organizational. The following section describes the impact of an innovative initiative in terms of capacity building at three inert-related levels:

Individual Capacity Building Four programmes leading to an award of Certificate in Education: Educational Leadership and Management were conducted in which one hundred and eight serving and aspiring primary school head teachers and community motivators were developed. Out of these, sixty-five (60%) serving and aspiring female head teachers and community motivators benefited from these programmes. These participants developed a wide range of skills such as effective communication, participatory decision-making, time management, reflective practice, community participation, monitoring and evaluation, managing change, curriculum enrichment, and supervision. The participants were also exposed to processes engaged in organizational development analysis.

Seven programmes leading to an award of Certificate in Education: Primary Education were conducted in which two hundred ten primary schoolteachers were professionally developed as reflective and skilful teachers. These teachers enhanced their subject content knowledge and improved pedagogical, assessment, reflective, and curriculum enrichment skills. Teachers were also exposed to various approaches to students and teachers' learning. Out of these teachers, one hundred and fifty six female teachers (74 %) benefited from the programmes.

Two programmes leading to an award of Advanced Diploma in Education: Primary Education were conducted and thirty-two primary schoolteachers participated who were developed as 'academic leaders' for taking on leadership role in their respective LRCs. Out of these, twenty-one (66%) were females who benefited from the programmes. Thus, these programmes developed female leadership enabling them to participate effectively in policy decisions.

One programme on monitoring, evaluation and documentation was conducted in which thirty-two candidates participated. Out of these, eighteen (56%) were females who benefited from the programme. Programme participants were from all management layers. The candidates developed their skills in preparing framework of monitoring and evaluation including performance indicators and monitoring tools. They also developed skills of how to analyze monitoring and evaluation data and write a report for purposes

of documentation.

Seven candidates participated in AKU-IED's two-year MEd Programme. Out of these, two (29%) were female. These teachers were developed for leadership positions in their respective NGOs / CBOs. The graduates of the MEd Programme serve as Professional Development Teachers (PDTs) in their respective "LRCs.

Female empowerment was one of the foci of capacity building through enhanced female participation in the programmes. The NGOs / CBO's leadership found to be appreciative of AKU-IED's efforts in providing adequate support to all female course participants, especially those from the rural areas who came out of their homes first time and stayed in Karachi. One of the female graduates mentioned that:

> Before coming to AKU-IED, I had in sufficient leadership and management knowledge and skills and I was somehow not confident about my roles and responsibilities as a head teacher. I was also unfamiliar with the issues related to classroom management, school development, community development, female education and team building. I was dependent on my management even for minor things. I [now] feel an incredible improvement in my leadership and management style. It has developed my confidence to make decisions and move ahead and find solutions to problems locally. As a result, I planned how to resolve this issue and came up with the idea to knock at the doors of the community and meet with parents, especially mothers, and encourage them to send their daughters to the school. I have decided that there will be a meeting with mothers to strength partnership with the parents on a monthly basis. I have learnt how to walk on the tight ropes of effective school management" (See Project Completion Report).

It appears that the graduates have developed a substantial understanding of their roles, which contribute towards building their own capacity required for sustainable improvement.

Interpersonal capacity building

One of the aims of these programmes was to develop skills in order to promote a collaborative culture and networking. The Course Participants (CPs) were exposed to the best practices of collaboration and networking. One of the graduates' impressions was cited in the project completion report that "the programmes encouraged us to work

together, and to reach out to the people around us for help." Graduates found this experience quite insightful because they learnt how to work collaboratively with others. It is evident that the NGOs / CBOs were using each other's 'benchmarking' for improving the quality of education in their own contexts. Hence, positive collaboration among the NGOs / CBOs provided CPs with opportunity to share their expertise and resources in order to accomplish the common goals. This allowed CPs to visit each other's schools and provide support in conducting professional development activities. In addition, CPs, along with other team members, started contributing effectively in initiating innovations for their school staff and the community members as reported by the different NGOs/CBOs leadership. Another graduate's impressions mentioned in the project completion report was that:

> The AKU-IED created an opportunity for the course participants from different NGOs / CBOs to work collaboratively and shared their experiences. We were also able to develop and strengthen the professional relationship among different people and work cooperatively for sustainable changes in their community.

This reveals that the participants did not only become aware of collaborative and networking practices but they also employed them in their own contexts. It was also found that the graduates worked together to strengthen the capacity of LRCs by developing short courses for their fellow teachers.

Institutional capacity building

Developing a professional platform at the grass roots level for the professional development of teachers and others was envisioned from the very beginning of the project. The NGOs / CBOs accordingly developed a platform for developing their teachers and others. This platform was conceived as a Learning Resources Centre (LRC). The development of the LRC and its functions were considered as unique features of an indigenous model of professional development. Each NGO / CBO identified a central and accessible school for the utilization of the professional development of teachers and others. An initial LRC framework was developed in collaboration with NGOs / CBOs (Memon and Mithani, 2003b). Each LRC was also conceived as a networking mechanism for promoting primary education. The NGOs were provided with necessary technical, professional and material support by the AKU-IED team to launch their NGO Access Programme for the professional development of teachers and others. All collaborating NGOs / CBOs developed a Pilot Programme of ninety contact hours for teachers' professional development. Each LRC

included 20 to 30 teachers in their Access Programme, which was conducted twice a month. The majority of NGOs will have concluded their first programme in December 2003.

The NGO Access Programme was conducted with teachers without disrupting their daily teaching and learning processes and contributed significantly towards enhancing each NGOs / CBOs' capacity to meet the growing professional needs of their teachers and school managers. The AKU-IED assisted in developing the capacity of LRCs through developing human and material resources. A female graduate said:

> Before attending the programme at AKU-IED, I had very little understanding of teaching and learning and did not have any clue of the holistic development of children. After attending this programme, my perception has changed in this regard. I now realize that the course has helped me to understand the practical approach to teaching-learning. The programme has provided me with the opportunity to re-conceptualize my beliefs and practices.
>
> Prior to joining the programme, I considered the students' mind like empty jars. However the experience at AKU-IED has enabled me to understand the practical approach that as a teacher we need to build on a child's previous knowledge. I felt a tremendous improvement in my teaching style and acquired a wide range and depth of concepts that have helped me to make connections among concepts, activities and strategies. I used to come to school without knowing my objectives.
>
> In addition to my skills, my attitudes regarding education and community participation also changed. I now prefer to consider my students' mothers as an integral part of the educational system. I arrange meetings with mothers in order to share problems with them. This has given me a lot of confidence and the mothers have started appreciating my role as a teacher". (See Project Completion Report)

Those who participated in the programmes have been performing different roles at LRCs. For example the graduates of the Advanced Diploma in Education: Primary Education and MEd provide academic leadership; the graduates of the Certificate in Education: Primary Education provide academic support; and graduates of the Certificate in Education: Educational Leadership and Management provide management support for conducting

Professional Development Programmes at their LRCs. These LRCs have provided a platform for teachers and others to be a 'community of learners' by generating a progressive discourse for promoting collaborative culture. The graduates provide opportunities for the professional growth and development of their fellow teachers through formal and informal discussion on the issues and challenges faced by teachers and others in their classroom situation. They have started working with teachers from other NGOs / CBOs to develop networking by learning from each other for building their own capacity. They collectively plan Professional Development Programmes at LRCs seeking solutions to their own problems for improving the quality of education.

Conclusion

It is evident from the narratives of the graduates that the innovative initiatives have made substantial impact at the personal, inter-personal and organizational level to build institutional capacity of NGOs / CBOs for improving the quality of primary education. The focus of the capacity building must be placed on creating the internal conditions for the development of collaboration, empowerment, ownership, networking and a sense of strategic leadership among the stakeholders to achieve the common goals. Schools can only improve their performance if there is adequate capacity for change at the above-mentioned three levels. Working with NGOs and CBOs reveals that institutional capacity building is a continuous process of creating internal conditions that can facilitate NGOs / CBOs to accomplish their objectives. Literature on professional development suggests that teachers and others learn on-the-job more effectively than off their workplaces. One of the strengths of this professional development model was that teachers and others were able to relate their new learning to their own context and apply and reflect on the implications. This allowed NGOs and CBOs to develop an indigenous model of professional development of teacher education and educational leadership. This model can also be replicated in other areas of Pakistan.

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PROMOTING FEMALE PARTICIPATION IN PROFESSIONAL DEVELOPMENT PROGRAMMES

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Abstract

A recent publication of the Ministry of Education, Islamabad, shows that the province of Sindh has a population of over 30 million. The overall literacy rate in this province is 46.7 %, while the female literacy rate is 35.4%. However, in the rural areas of Sindh the female literacy rate is 13.11% against the male literacy rate of 52.1%.

There are many social, cultural and economic factors that inhibit females from availing opportunities on an equal basis with the other segments of society. The literature also reveals that due to the above-mentioned factors females are confined to play a passive role in general and in the education sector in particular. According to a recent UNDP publication, there is considerable disparity between males and females in terms of professional development.

Considering the importance of professional development of females in the education sector in Sindh, the Aga Khan University Institute for Educational Development (AKU-IED), under the Pakistan Non- Government Initiatives (PNI-II), took an initiative to launch a project titled 'Strengthening the Capacity of NGOs/CBOs'. The project targeted to provide opportunities of professional development to 258 individuals, but the actual number of those who graduated was 388, considerably exceeding the planned target. Out of 388, 68 % (262) were females, which show the enthusiasm and commitment of the participants, collaborating NGOs/CBOs and AKU-IED towards the professional development of females. Through this initiative, females were trained as 'agents of change' to motivate their communities towards education of their children, in particular the girl child.

This presentation unfolds the learning experiences of the USAID Project-III team in promoting female participation in professional development programmes at AKU-IED.

Introduction

Education is one of the important keys to breaking the vicious circle of ignorance and exploitation and empowering human beings to improve their lives. The aim of education is to bring about all round development, which includes one's personality, mental understanding and spiritual and moral values. Therefore, priority should be given to the primary and pre-primary levels of education, being the basis of the education system. However, these values should also be promoted in other levels and forms of education. Dr Mahbub-ul-Haq (2000) states in his report that "during the last 20 years, significant progress has taken place in the state of education in South Asia, but vast gap still remains between the educational achievements of male and female counterparts. There is a need to improve both the access of women and their inclination to non-traditional fields. School location, enrolment, facilities for female students and teachers, curriculum and examination policies are among the various school related factors that can contribute to gender gaps in enrolments. These factors can influence parents' decisions on whether to educate their daughters. It is also a basic human right. Therefore, educating women is an important goal in itself". And UNESCO's (1992) report states that as human beings, women, too, have the right to control and direct their lives. The renewed commitment towards 'Education for All' brings the best hope for improving the situation of women's education in this century.

In Pakistan, particularly in rural and suburban areas of Sindh, women are situated largely at the periphery of the educational system in comparison to their male counterparts. According to Bajiya (2002), "lack of education is one of the reasons for a lot of problems in our society". Traditionally, it is considered that women are confined to their homes and men are the breadwinners of the family. Education can play a crucial role in enhancing the status of women and placing them on an equal footing with their male counterparts. It also increases women's ability to secure employment in the formal sector. According to Haq (2000), "no society has ever librated itself economically, politically, or socially without a sound base of educated women".

The World Bank conducted studies which indicated that "the countries with a lower female enrolment rate would have worse indicators of social welfare. In other words, a country, which neglects female education, will spend a great deal more to achieve a level of social well being similar to that of a country which has been supportive of female education" (Haq, 2002).

Successive governments of Pakistan have grappled with the issue of Universal Primary

Education (UPE), in general, and girls' education, in particular. In order to achieve the UPE target, several initiatives were undertaken at the government level but they did not seem to have any major impact. In the late 1990s the government of Pakistan recognized the role of community participation in the development of social sector, particularly education. Thus, community participation became a major thrust of government plans and programmes such as the Social Action Programme (SAP) Phase I and II to achieve the UPE target. As a result, several non-governmental organizations (NGOs) and community-based organizations (CBOs) emerged as 'driving forces' to take leading roles in implementation of governmental initiatives at the grass-root level. Currently, 1,700 NGOs are registered in the Sindh province. Many NGOs/CBOs do not have adequate institutional capacity to manage the governmental and their own educational initiatives effectively. They have been experiencing numerous challenges, including gender equity and the quality of education, for promoting pre-primary and primary education in rural and suburban areas of Pakistan.

In order to strengthen the capacity of NGOs/CBOs, the United States Agency for International Development (USAID) provided financial assistance to the Aga Khan Foundation (AKF) for 'Pakistan Non-Government Initiatives' (PNI). One of the projects titled 'USAID Project-III' within PNI-II deals with 'strengthening the capacity of NGOs/CBOs in primary education', in general, and girls education, in particular, in rural and suburban areas of Sindh. The Aga Khan University Institute for Educational Development (AKU-IED) took on a leadership role in building capacity of the NGOs/CBOs through context- based professional development programmes. The project contained four major objectives: a) to build upon the successful NGOs/CBOs' work in rural Sindh; b) to provide management training to head teachers, community management and NGOs/CBOs staff; c) to provide follow-up support to teachers and others; d) to develop capacity among NGOs/CBOs members to better monitor and document the progress of their educational initiatives.

Based on the initial dialogues with 14 NGOs/CBOs and needs assessment workshops, the Project-III team at AKU-IED launched a series of professional development programmes related to classroom teaching and teacher education, educational management, monitoring, evaluation and documentation, in order to enhance individuals and organizational capacity of NGOs/CBOs. The purpose was to help teachers, headteachers and community leaders to become reflective practitioners so that they could deal with the complexities of classroom teaching, teacher education, educational leadership and managerial tasks at 'individual, organizational and community' levels. This project had served as a 'building

block', both for AKU-IED and the NGOs/CBOs, in developing sustainable collaboration to improve the scenario of education, particularly for girls.

The purpose of this paper is to unfold some of the lessons learnt and challenges faced by the USAID Project-III team in promoting female participation in professional development programmes at AKU-IED, along with some narratives of female participants about their experiences. Diverse range of techniques were employed in collection and analysis of data such as course participants reflective journals, written reflective assignments, experiences from observations along with formal and informal interviews with different stakeholders and write-ups of follow-up visits and workshops.

Quantitative achievements: Step towards the peak

One of the aims of USAID Project-III was to promote female participation in professional development programmes. Although these programmes may not create opportunities for more jobs, self-awareness through these programmes has helped the community to allow their females for availing such professional development opportunities outside their homes. The following table indicates that out of 388 graduates, 262 (68%) were females who benefited from the programmes. This seems a significant achievement of the project towards enhancing and promoting female participation for their empowerment. This also reveals the commitment and enthusiasm of both AKU-IED and collaborating NGOs/CBOs.

Programme	Number of Programmes Offered	Project Target	Project Result	Male	Female
Certificate in Education: Educational Leadership and Management	4	70	108	43	65
Certificate in Education: Primary Education	7	125	210	54	156
Advanced Diploma in Education: Primary Education	2	26	32	11	21
Monitoring, Evaluation and Documentation Course	1	30	32	14	18
Master of Education: Teacher Education	--	7	7	4	2
Total		**258**	**388**	**126 (32%)**	**262 (68%)**

A significant aspect of increased participation of females from NGOs/CBOs indicates recognition by the community leadership that females in rural areas have an important role to perform beyond their household chores.

Lessons learnt: What difference?

Following are some of the lessons learnt by the project team along with anecdotes from experiences of teachers, headteachers, NGOs' leadership and community members, which reveal that the programmes have helped the female participants in changing their attitudes, perceptions and practices, at the individual and organizational levels. Most graduates demonstrated improvement in self-confidence, openness to share experiences, time management and problem-solving skills and attitudes; they learnt to disagree in a positive manner. They developed skills for looking into issues from different angles and leave the room open for further discussion. Change in their practice, understanding and attitude was noticed in many ways. The active participation of females apparently led to these changes. Readiness, willingness, and openness of female participants assisted the project team to contribute more effectively to their capacity-building.

Mutual trust helps to understand each other's perspective and promote interest towards professional development

Mutual trust served as a source for encouraging female participation in the programmes. It may be mentioned here that in the rural areas females are not allowed to work with their male counterparts due to cultural considerations. UNESCO (1992) reported that the men's negative attitude towards the education of their daughters/sisters or their wives reflect their deep-rooted fear that education will lead women to become independent and "uncontrollable", they may start "demanding" too much. But these programmes served as 'catalyst' in changing their perception about females' role in community development. AKU-IED and collaborating NGOs/CBOs collectively ensured that females should get high priority in all professional programmes. For this purpose, the project team, in collaboration with NGOs/CBOs management, remained in contact with participants and their families in order to resolve this issue. The NGO/CBOs' leadership seemed to appreciate AKU-IED's efforts in providing adequate support to all female course participants, specially those from the rural and sub-urban areas who came out of their homes for the first time and stayed in Karachi. For example, one of the female participants said, "[when] I wanted to participate in the first visiting teacher (VT) programme; my

brother did not allow me because of co-education… Today, [however] I am here [as] since my brother [was] convinced [when he saw] by the first VT and [CEM] graduates… their insistence did not allow my brother to say no…". This fact has also been recognized by the NGOs/CBOs leadership and has resulted in developing enhanced mutual trust that provided more access to females to participate in AKU-IED programmes.

Conducive environment, integrated and cohesive approaches to planning and delivery of the programmes contribute towards making a difference in organizations

The project team, along with NGOs/CBOs, have continued to practice and learn that an enabling, safe and adequate learning environment can and does significantly increase female participation in the professional development programmes and has a direct impact for boasting up their enthusiasm and interest leading towards NGOs/CBOs capacity-building. Conducive environment and participative delivery of the programmes promoted self-recognition, positive self-image and stimulated critical thinking among participants. It emerged from reflections and actions that the programmes had positively helped in cultivating their ideas. Most of the female CPs started recognizing their strengths, knowledge, skills and intellect and started to believe in their rights to dignity and justice. As stated by one of the CPs: "We learnt various techniques and strategies to mobilize community towards girls' education and critically looked at the hindering factors in promoting female education and now we know that we can and will make a difference". During the professional development programmes, CPs revisited their current notion about the nature, status and attitude of the community in promoting female education. The majority of them shared their experiences, which highlighted the contextual realities of female education. The male CPs were supportive and of the view that their female counterparts could also contribute effectively.

Field visits help in developing positive interaction, enhancing understanding of concepts and issues, improving decision making and institutionalizing the shared idea, and keeping morale high while implementing new ideas / knowledge

Sharing their feelings during workshops at AKU-IED, the NGOs/CBOs leadership and schools' management said that the field visits by the instructional team had been extremely productive, well focused, organized and thought-provoking for them. It has been noted during the field visits that the graduates, especially females, had played key roles in taking their schools to the present level of achievement. During the regular field/follow-

up visits, it was found that majority of NGOs/CBOs had assigned major roles to AKU-IED's female graduates who proved to be successful as effective teachers and educational leaders with strong decision-making abilities. One of the graduates believed that the programme experience raised her confidence to be a better principal:

> …before coming to AKU-IED, I did not have sufficient leadership and management knowledge and skills, I was somehow not confident about my roles and responsibilities as a head teacher. Also, I was unfamiliar with the issues related to classroom management, school development, community mobilization, female education and team building. Even for minor things, I was dependent on my higher management. But after attending the programmes at AKU-IED, specially during the field components where I was being observed by my facilitators, who being critical, provided support and feedback on minor but important happenings made me realize the difference between what I have been up to and what should I do. I myself felt incredible improvement in my leadership and management skills. It developed my confidence to move forward and find out problems and their solutions locally and make decisions. For example, as a manager I was responsible to enhance girls enrolment in my school during this academic year but I failed. I did not understand how to solve this issue. Because my attitude was very bossy and I did not value my colleagues. After attending the programme, my attitude changed and I started working with my colleagues. As a result, we planned how to solve this issue and came up with ideas to knock at the doors of the community and meet with parents especially mothers and encouraged them to send their daughters to the school. Finally, we achieved the targets and realized the importance of involving mothers to solve the issue. Now we have decided that once a month there will be a meeting with mothers to strength en partnership with parents. The programme really developed my interpersonal and management skills. I did not know how to walk on the tight rope of effective school management, but this programme has enabled me to run….

Opportunities for re-conceptualization about beliefs and practices provide unique learning and prepare for dedicated work regarding community development issues, especially promoting female education

Female participants seemed to be more sensitive towards practices of promoting girls'

education and the improvement of the quality of education in their schools. During one of the sessions, a CP shared: "In my area very few girls are able to attend schools. While in Karachi I see girls are more educated than boys. When I go back to my school after the course, I will motivate the community towards female education…. The programme made me realize that without female education there is no development". To promote female education, majority of the participants elaborated their experiences to paint their contextual realities. During the field visits, it was evident to the instructional team that the CPs through different activities had highlighted the real situation before the community and motivated them. As one female graduate shared with the team members:

> In my village majority of the people [male] used to do cock fighting and spent a lot of money on it but they did not want to send their girls to schools. According to them, educating girls was a costly affair. But with the help of CEM graduates and NGOs leadership's efforts we had organized a parent's day in the village. On that day students presented a tableau in which they presented the same situation. We were so surprised to see that some parents [fathers] came to us and realized that they were spending money on cock fighting [kukar larana] but never thought about our daughters education. They promised to send their daughters to the schools.

This visible impact on community perceptions regarding girls' education was noticed in the field. The community now seems to be more enthusiastic about educating their girls. Even illiterate women in purdah are prepared to educate their daughters, as one of them shared with the team members: "asan ta na parhi saghiyasy per munjhi daih (Beti) khi ostaain perhaeendas jastaeen ho-ai parhandi (I am not educated but I will educate my daughter as much as she desires)." Such reflections depict that people might have thought in line with the point made in Haq. (2000) that "children of educated mothers have a greater growth potential also they are more likely to send both girls and boys to school and to keep them in school longer". A general awareness about the need to educate girls is visible. One can see boys and girls participating in more or less equal numbers in schools. This situation was created by the hard committed work of the graduates who have been engaged in critical thinking exercises and sensitization about the existing situation and their actual roles to be performed.

Continued professional support helps in improving the school outcomes and enrolment

The project teams working relationship with the NGOs/CBOs leadership and CPs/graduates

has been on the basis of equity, fairness, openness, and shared leadership. Systematic and continued support helped to enhance professional learning of NGOs/CBOs members and the project team. At this time, parent-teacher relationships have begun to improve which helped to control the dropout rate in these NGOs/CBOs schools. During the field visits the instructional team observed that the dropout in girls' enrolment has been decreased, perhaps, due to use of teachers' alternative instructional methodology, positive attitude and improving relationship with their communities. One of the students of Class IV shared her thoughts with the team members: "I never want to leave this school as I learn to sing, do art, [play] games and read storybooks. When I grow up I want to become a teacher in this school."

One of the graduates shared: "Because of the friendly and pleasant environment of the schools not only [the] girls are coming to school regularly but they are encouraging their mothers to visit the schools." One of the mothers from the same village told the team: "I am so happy because my daughter is here and she is neat and clean and is getting education, otherwise, she would have been working like me at home, sweeping, washing clothes and pots and taking care of hens, eggs and goats."

There is substantial evidence about the impact of professional development programmes on girl students' enrolment in schools of rural and suburban areas. The girl students' enrollment rate has increased by 25% on an average amongst the NGOs/CBOs schools. Some NGO/CBOs reported greater pressure from the parents for admission, but due to the lack of capacity, they politely refused to take more students from the same village or area. On the other hand, some NGOs/CBOs have opened more community-based schools.

Capacity building requires clear and shared vision and mission. It only happens when the policies and plans for improvement are made collectively, which essentially require certain forums to be developed and sustained within and across the organizations

For sustainability of professional development opportunities at the NGO level, AKU-IED assisted in establishing 16 Learning Resource Centres (LRCs) through which each NGO had been conducting field-based programmes for their teachers from different cluster schools. These LRCs are managed and led by the AKU-IED Advanced Diploma graduates, out of which 9 are female (out of how many?). Using these LRCs as forums for sharing, all respective NGOs/CBOs seem to have developed a positive attitude towards

networking among themselves. According to one of the NGOs, "Learning Resource Centre is serving as an information and communication centre for our educational programmes and other activities. It is a placeto hold free exchange of views, needs assessment where teachers, head teachers and community members are discussing their expectations, challenges and evolving solutions according to our context. We are also using this LRC for networking mechanism within and among NGOs for promoting NGO-based professional development programmes in order to ensure long-term sustainability." AKU-IED also has provided a network forum not only for graduates from different NGOs to share, discuss and work together for school improvement but to develop new horizon of professional relationship within and across NGOs/CBOs through different professional events such as opening/closing ceremonies of programmes, seminars and workshops. This has helped the NGOs/CBOs for re-thinking their notions and practices with regard to capacity building at the organizational level.

Challenges

Since the programmes being offered by AKU-IED are based on co-education, orthodoxic cultural boundaries inhibit females in working together with male counterparts, but enhanced mutual trust and respect between NGOs/CBOs and AKU-IED, and a collaborative environment, has served as a source for improving female participation in the programmes. A significant number of participants were females who came from rural and sub-urban areas of the Sindh. For most of them, this has been the first co-education experience. However, it remained as one of the major challenges to help female participants to work freely with their male colleagues.

- At times, the project team found communication gaps between course participants (CPs) and NGOs/CBOs leaders or middle management, which sometimes affected CPs participation in programmatic activities at particular schedule.
- Some of the partner NGOs/CBOs still need to bring about changes in Terms of References (ToRs) of the AKU-IED graduates as they are overburdened with work (classroom teaching and professional development activities). It becomes challenging for the project team when CPs/graduates cannot cope with the assigned tasks because of their heavy workload.
- There was a huge diversity among the CPs who belonged to different socio-economic, geographical, academic and professional backgrounds. At times catering to the needs of such a large and diverse group of CPs was a major challenge for the project team to overcome.

Conclusion

Based on firm evidence the research team is confidant that the professional development programmes brought a real qualitative change in the respective context. More importantly, the project has developed experienced and capable human resources, particularly females, committed to improving their schools and motivating their communities towards girls' education. It is hoped that these individuals will be utilized and supported by their stakeholders for contributing their best. Goleman (1996) in his comprehensive book 'Working with Emotional Intelligence' says, "Hope, in a technical sense, is more than the sunny view that everything will turn out right" (p.98). He also quoted Snyder's (1991) definition of hope, "believing you have both the will and the way to accomplish your goals, whatever they may be".

Providing encouragement and support to schools reinforces their will. Providing knowledge, tools and techniques gives them the way, Hope is what sustains change agents when facing difficult challenges and setbacks' (Prenton, 1999).

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THE STATUS OF FEMALE EDUCATION IN RURAL BALOCHISTAN

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Abstract

Balochistan is the largest province in Pakistan, occupying almost 43% of the country's land area and is approximately the size of France. It is also the least populated province with only about 5% of the population residing there, 80% of whom are scattered in small villages. These villages have remained largely untouched by the advances of the modern age, and largely ignored by the central authorities. Very few resources have been made available to these rural areas with the unfortunate result that education for all is extremely under-funded, and the most seriously affected by this neglect are the women and the girls.

The status of female education in rural Balochistan presents a depressing picture. Although illiteracy in Pakistan as a whole stands at 80% and growing, the literacy rate among rural women in Balochistan is bleaker. It is estimated that less than 2% of rural female in Balochistan are literate. Literate and illiterate traditions assign the women certain responsibilities such as cooking food, cleaning the house, child-bearing and rearing, and all other domestic support needed by her husband and other family members. The benefits of education for girls in rural Balochistan have only recently being recognized.

The Mobile Female Teacher Training Unit (MFTTU) is a project that was developed out of the realization that girls and women in rural areas deserve an education and that their role in rural development depends on their larger participation in the process. Cooperation between the Government of Balochistan, from the provincial to the district level and international organizations such as UNICEF, USAID, PED, TVO, World Bank and the Society for Community Support for Primary Education Balochistan and Village education Committee, which is made up of parents, has enabled the MFTTU and the society to bring together available community resources for girls education in the rural areas and to train female teacher for the villages. Although it is an excellent programme and has a significant impact on the female education in Balochistan, it was losing its desired benefits because of issues related to time and the handling of the programme by traditional people. When I came back from AKU-IED, I was given charge of this programme. On

the basis of my experience at IED, I introduced some new professional interventions in the program. They worked very well.

The main objective of this program was to increase the sustainable enrolment of girls in Primary schools in the rural areas by identifying qualified females from the villages who will become primary teachers in the villages. The main task is to train these teachers in their own environment and close to their communities.

This paper describes the efforts made by the Education Department Government of Balochistan with the assistance of donors and effective support of communities to make a significant break through in female education in the rural areas of Balochistan. This paper will also explain the main features of the research studies carried out on the effectiveness of this program by different organizations.

On the basis of these studies and the emerging trends of Education sector reforms I was given a task to revise the model of this program. With the help of discussions and consultation with teachers and field staff officers the revised version of MFTTP was developed. It is a beautiful blend of theory and practice spread over three years. Although it is an excellent model in theory, a huge number of female teachers have dropped out from the course in subsequent years and are finding out alternate easy ways for getting the certificate through Allama Iqbal Open University Courses or from some other private institutions.

This paper also looks into the realities of the introduction of any change and its sustainability. One must be very careful while bringing about change based only on a theoretical basis without taking into consideration field realities. It also reflects the alternate mechanism (shortcuts) present in the society and their attractiveness for teachers in getting annual increments or running salaries by proving them qualifications through such pirated certificates.

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Background and rationale

Balochistan is the largest province in Pakistan, occupying almost 43% of the country's land area and is approximately the size of France. It is also the least populated province with only about 5% of the population residing there, 80% of whom are scattered in small villages. These villages have remained largely untouched by the advances of the modern

age, and largely ignored by the central authorities. Very few resources have been made available to these rural areas with the unfortunate result that education for all is extremely under-funded, and the most seriously affected by this neglect are the women and the girls.

The status of female education in rural Balochistan presents a depressing picture. Although illiteracy in Pakistan as a whole stands at 80% and growing, the literacy rate among rural women in Balochistan is bleaker. It is estimated that less than 2% of rural female in Balochistan are literate. Literate and illiterate traditions assign the women certain responsibilities such as cooking food, cleaning the house, child-bearing and rearing, and all other domestic support needed by her husband and other family members.

The benefits of education for girls in rural Balochistan have only recently being recognized. The Mobile Female Teacher Training Program was developed out of the realizations that girls and women of rural areas deserve an education and that their role in rural development depends on their larger participation in the process. The main features of this program were to train more female teachers in rural areas within the cultural context of rural areas by conducting training in the field to teach in their own villages

Purpose of intervention

Besides this programme some other non-conventional approaches for rural female education were utilized in Balochistan. For the sake of consolidation and reviewing these programs in the light of new emerging trends in Education, the Government of Balochistan sent 12 senior teachers to Aga Khan University Institute for Educational Development (AKU-IED) to complete the Master of Education (MEd) programme. Their main responsibility was to undertake the task of reviewing and refining these programs after completion of their MEd. Luckily I was also a member of that professional team.

After my MEd I was assigned the task of reviewing the Mobile Female Teacher Training program and to update it according to the emerging trends in education.

Intervention strategies

I started working on this task along with my three other MEd colleagues. We studied the program in detail and met female teachers in their schools and communities. We also review the scheme of study of the three months' condensed version of Primary Teachers Certificate (PTC), which was used to train the primary teachers in this program.

The first thing we felt was that just three months of condensed training for a primary school teacher is not sufficient. So, in spite of resistance from teachers and parents, we tried to convince the provincial government to increase the duration of this training from three months to nine months but spread out over three years, with three months of training per year.

The enhanced training period was utilized for more practical activities rather than just theoretical training. Teachers are given more exposure to classroom teaching practice by developing teaching lessons and presenting them in classrooms.

Based on this teaching practice they are, for the first time, being encouraged to start thinking critically on their own activities through reflective practice. Student-centred activities were introduced and teachers were asked to develop these types of activities by keeping in their mind the actual situation and resources present in their own schools. They were tooled with the new joyful learning activities such as developing listening and speaking skills of students through story-telling, and singing poems and rhymes with their friends. In line with the needs of teacher, some new ideas of health, hygiene, multi-grade teaching and environmental education were introduced.

Assessing the impact of intervention

This intervention started just two years ago and none of the teachers have completed the three years required mandatory period for the course. It is very difficult to see any significant impacts in this short time; however, sometimes the effectiveness of the process itself becomes the desired product. The female teachers trained through this revised version of the programme were continuously monitored through the existing system, that is, through a learning coordinator and district education field staff during all nine months after receiving three months of training.

According to the feedback from learning coordinators, head teachers and other education field staff, these teachers are now more confident and are trying to use some new strategies in their classrooms. Our introduction of the new module of health and hygiene in the revised version, according to the district field staff teacher, also produced very good impact on student environment and on other teachers working in these schools.

Another great achievement of this program is the attitude of teacher towards integrated textbooks. In Balochistan, the Education Department had introduced integrated books for classes 1 to 3, but due to a lack of training they have been splitting the books again

into subjects and are maintaining different notebooks for every subject. However, after training, they have started using these books in an integrated manner.

Another impact of this intervention has been seen in multi-grade teaching. Approximately 50% of the schools in Balochistan are single-teacher schools. Based on this need we introduced a module of multi-grade teaching in the new version of the programme. It worked very well and now field staff officers are demanding this multi-grade training for other teachers also.

A module of continuous assessment was also introduced in this training. It was also well received by the teachers and students in the schools. It has provided teachers with a better assessment technique and allows them to take relevant remedial measures well in time.

Above all, due to the spreading of the training over three years teachers feel more attachment and affiliation with their education system and also give more value to three years training then just one, short three-month training. It provides them more opportunity to apply theory to practice after equal intervals of time. They have more chances to share their achievements and problems with colleagues and teachers and to update their knowledge continuously from different inputs.

Due to the three years continuous professional attachment teachers are given some on-the-job assignments such as introduction of easy action research in their school and trying out some new interventions in classroom management, teaching methodologies and interaction with community. They are asked to write reflective journals of these new interventions regularly and to share these with their head teachers and learning coordinators. Some of them are so fascinated with the outcomes of these processes that they write letters continuously to us. They are very happy with liveliness of teaching learning processes in their classrooms and with the significant positive change in the behaviour and achievements of their students.

It is human nature that when some one does some good work she/he needs some appreciation and encouragement; hence, these teachers too want to show their good work and innovations to their master trainers and resource persons. They are strongly demanding that we (their Master Trainers) be sent to visit their classrooms to see the positive changes they have produced with their new interventions. They also share these achievements with our team through their letters and phone calls.

Shortcut seekers, and those who were previously taking wrong benefits of just three months training to board on education salary, are now discouraged from their incorrect practices due to this in-service mode of training.

One important impact of this intervention directly affects us, the PDTs of AKU-IED. Due to the positive and comprehensive intervention, the Government of Balochistan Education Department has started recognizing our abilities and we, the PDTs, have been assigned many important professional tasks. We are given preference in all sorts of professional discussions and input as compared to the other traditional subject specialists and teachers.

Discussion

In the beginning of this program there was a myth that "parents in the rural areas don't want their girls to go to school"; however, this myth was proven wrong. The fact was disclosed by a survey that showed that 28,000 girls in rural areas were attending schools with boys, and many were being counted in the school register as boys.

A large number of female candidates turning up every year for training in MFTTP shows that the programme is popular in Balochistan. Although in this way a large number of vacant posts were filled with trained female teachers in rural areas and fulfilled the objective of providing access to females in the rural areas to education, there were a few concerns about the quality of education in these schools. The main reasons were that the shorter duration of training did not change the attitudes of these teachers themselves. All necessary skills required for a primary school teacher were not always developed in the teachers in the brief time available.

Another drawback was the relaxation of qualification in some cases. Some teachers who had only been educated till Class 5 or Class 8 were also appointed in this process. It meant that besides the need for development of pedagogical skills, there was also an acute need for the enrichment of content knowledge of the trainees. Hence, in the new version of Mobile Female Teacher Training Program all curricula from classes 1 to 5 are included, along with different methodologies.

In this process the role of the master trainer is just provide participants with awareness and guidance for planning, preparation and presentation of model lessons and in the use of different teaching methodologies according to the needs of the environment, resources available, and the mental level of students. Then, the teachers are supposed to plan,

develop and present daily lessons of different subjects and levels in actual classrooms and necessary feedback is given on the spot by their master trainers. This arrangement not only enriches their content knowledge but also polishes their pedagogical skills.

One very dangerous and threatening situation to the existing Government Colleges of Elementary Teachers was that this program, in its previous mode, was providing a shortcut to females for joining the education profession as a teacher after just getting a three-month training. The females in the province, instead of going to elementary colleges for a year-long PTC training, were managing to get admission in the three-month PTAC through different means.

This intervention in the form of a revised version of this training has tried to overcome some of these problems. The prolonged training period (nine months) discouraged the shortcut seekers. Its mode of conduction and frame work, that is, three months each spread out over three years, provided a beautiful mechanism of turning theory into practice. In the nine months of teaching, participants try to apply all the skills they have learned in three month of training and, the following year, they come back with lots of experiences to share and questions to seek suitable answers to.

Lessons learnt

In education no intervention should be considered perfect for all times and in every situation. The same thing has happened with this program. It was a very successful program at one time and several impact studies showed its effectiveness towards the achievement of the goal of providing access to females of rural areas to school. But, there was a need to review this program after regular intervals because people always misuse and exploit the simplicity of these interventions. All sort of interventions have some boundary conditions and limitation that need to be kept in view.

In the process of teacher change the increased collegiality among the teachers improved the likelihood of risk-taking and of trying to adopt new approaches in the classroom. In this way things started moving towards a positive direction.

Conclusion

In the light of the above discussion about the program and the role of the PDTs in modernization of this program, teacher change is clearly seen as a very complex phenomenon. It requires very careful planning and comprehensive implementation with

consistency and sustainability.

In the Government sector there are quite a few people who can produce a significant change in the system, provided that they are allowed to do so and their work is appreciated. In this particular program, the Government provided full support to PDTs for reviewing and planning the new version of MFPPP. They accept this task as a challenge and worked on it day and night and, with the help of different stake holders, they made this program a success.

In order to develop a critical mass in the Government system there is a need to revise a few very rigid rules for sending the teachers to the AKU-IED MEd programme so that all benefits and service protection are provided. In addition, there is also a need to place teachers appropriately once they've completed their degree programme.

THE IMPACT OF OBSERVATION APPROACH ON STUDENT TEACHERS' LESSON PLANNING & CLASSROOM TEACHING

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Abstract

Students of the 4th year in the school spent several weeks observing and then teaching students in local schools. Their practice was supervised by both university teachers and teachers in the respective schools where the student-teachers were practising.

This paper presents the study on the impact of observation and giving constructive feedback to student-teachers during their teaching practice. It focuses on lesson planning and execution of that plan in the real classroom.

The paper also focuses on the issues, challenges and some lessons learnt on the part of an observer. It also reveals the effects and outcomes of some basic concepts in writing lesson plans.

Finally, the paper discusses the tools used to measure effects, results and analysis of the study and directions for further studies.

My Experiences in the field

There is an establishment of school-based partnership of Osh State University with Secondary schools which works as a bridge in the sphere of professional preparation of student-teachers.

Contrary to teachers, student-teachers seemed more fearful of observations that affected their teaching as well to the extent of making one pessimistic about the impact of their teaching on students' learning.

Therefore, the purpose of observing student-teachers' lessons was to encourage a positive

attitude towards concept of being observed and observing other lessons with the aim of improving ones lesson planning and implementing it in the classrooms. In seeking ways to remove these fears among teacher, a number of questions can be raised such as, can these fears be avoided? If yes, what factors cause these fears and what can be done to remedy the situation?

Some of the shortcomings arise from teacher-training itself for classroom teaching. For instance, traditional teaching requires student-teachers to write a lesson plan in fragments and not as a whole lesson plan. In addition, stressful student-teachers are not prepared, the environment is not supportive, and feedback is overwhelmingly negative. In this case student-teachers face difficulties in lesson planning, time constrains, etc.

Among the solutions, student-teachers had a week-long opportunity to observe other experienced teachers' lessons as commented by Mclntyre and Brown (1993) who point out that student-teachers can and should learn a great deal from the experienced teachers they observe in schools (p. 12).

In connection to the same Thiessen points out in Brown and Mclntyre that teachers also learn through a structured process of feedback on their own teaching.

Therefore, emphasis was on planning as this gives teachers overviews of their lessons and indicates an appropriate pace and sequence, and connects classroom events with learning. In the case of planning some basic concepts were presented such as writing objectives, sequencing of activities, and stages of activities.

Data collection

There were two kinds of groups: the group that was being trained as interpreters and the one which was being trained specifically as teachers. To provide evidence of their practice each student wrote a reflective journal (see Appendix A) after teaching. In addition, reflections and debriefing sessions were used in order to help student-teachers reflect on their learning and challenges. Debriefings followed, which were concerned with the student-teachers' feelings about teaching a lesson and being observed.

Non-judgmental observation was used to observe whether actual teaching matched with the plan. Feedback (See Appendix B) was provided after each observation and detailed notes of the lesson were made and used as a basis of a short report for the teacher to read.

Student-teachers' written lesson plans were also used as one of the authentic sources of data. During debriefing there were discussions about the teaching which was followed by questions about the expectations of their plans and to what extent those expectations had been met. Student-teachers responses indicated that they did not have past experiences in writing lesson plans.

Results

In fact, experience preceded students' understanding. Students seemed to increase their interest in teaching. Every day lesson plans seemed to work better, which helped student-teachers to better understand their roles as classroom teachers.

It was learnt from the observations that the group that was being trained as interpreters was less likely to change as they feared being observed; the reason for this was that they knew that they were not going to become classroom teachers in future.

On the other hand, another group that was being trained specifically to become teachers was more likely to change and the following changes were observed during observation: Student-teachers were able to plan effectively. They also seemed to be more confident in teaching. They also increased their ability to reflect about teaching and became less afraid of being observed. In addition, their attitudes towards teaching became positive. This was in spite of the fact that some students found themselves in the teaching profession by chance.

Interpretation of results

Intervention was partially successful: For instance, specific instruction on lesson planning increased students' ability and, therefore, they gained confidence. Reflection made students identify successes and failures and helped them understand the process of planning and teaching.

In addition, although observation and debriefing sessions were primarily concerned with lesson planning, and skills and strategies of classroom teaching, they helped student-teachers make a change towards becoming more professional.

Directions for further study and Intervention

Examine mentoring program:

1. Train university level methodology teachers in lesson planning
   a) students will be better prepared before they begin teaching
2. Train supervising teachers in schools in the process of lesson planning
   a) Students will receive continuing support as they do their practice
3. Training supervising teachers in schools to provide constructive feedback to students during their practice teaching period.
   a) It will make practicing teaching more positive and a good learning experience.

Lessons learnt

From this study I've learnt a great deal about the complexities of teaching student-teachers' as compared to teaching regular lessons. It was clear through my study that in order to understand more about the process in practice, the individual's interest and efforts in his/her learning is very important. On the basis of this study a number of suggestions for student-teachers and teachers emerged. For example: how can student-teachers be helped and encouraged to get access to experienced teachers?

An important lesson learnt from this experience was that we couldn't improve novice teachers without changing their beliefs, skills, and abilities in teaching. I was given many students, so it was learnt that change could be in little steps.

Planning activities and follow up activities should also be seen as joint efforts between group teachers and subject teachers and these can enhance the quality of work. It was learnt that in order to make learning successful, training should be seen a continuous process.

Strengths and potential challenges of observation

Nisbet (1977) in Bell (1993) points out that observation is not a natural gift, but a highly skilled activity and also requires capacity for original thinking and an ability to spot significant events. It is certainly not an easy job. Anyone who has carried out an observation study will no doubt agree with Nisbet that observation is really not an easy job.

Direct observation was used in this study in order to discover whether students do what they say they do. The problem that was encountered was that the observation was interpreted according to observer's view only; if other teachers had observed the same task they would have had their own particular focus and would have interpreted events in their own way. Therefore, observation are often described as subjective.

There were some strengths such as quite a bit of time was given to the observee. More opportunity too was given to observees in order to create clear and more focused objectives. Observing each student-teacher was highly personalized as observer focused on individual student-teacher and worked at own pace.It also allowed observee and observer to concentrate one particular issue like lesson planning and implementing it. There was also a non-competitive environment.

There were challenges as well as: Input came from only one person (the observer). Evaluation and feedback also came from that same person only. It was impossible to observe everything; therefore, only the process of the lesson was observed.

Issues of making a difference

The major issues arising from this study related to time, as it is difficult to make a change in a short time.

Students were treated as students but not as teachers. Student-teachers seemed to not like being observed and didn't feel the same sense of responsibility as teachers.

A large number of students made it difficult for me to carry out observations.

The diversity of students, personal dispositions, commitments, and individual beliefs about teaching made it more difficult to convince the student-teachers to share their ideas freely.

Conclusion

Overall, feedback was appreciated by the student-teachers and students were able to make some change in themselves. In addition, student-teachers' teaching repertoire was enriched through the process.

Appendix A

Answer these questions after you have taught lesson and write brief notes on a separate sheet of paper.

1. What were the objectives of the lesson?
2. Did you achieve your objectives? If, yes how and if not why?

3. Write down the main stages you actually followed in the
    a)
    b)
    c)

Think about the following questions

1. Did the lesson plan help you? If so, in what way?
2. In what ways was your lesson different from the plan?
3. What changes would you make to the plan for the next time?
4. What did you learn from this lesson planning?
5. Your reactions to lesson plan failure?

Adapted from " Teach English" by Adrian Doff. Cambridge University Press.

Appendix B

Teaching Practice: Observation and Feedback Form

Name of student	
Level of class	
Number in class	
Data/time	
Aim of the lesson	

Section 1.

Preparation	Comments
Lesson plan, balance and variety of activities. Timing	
Clarity, limitation, and specification of aim	
Suitability of materials and methods for level and type of class	

Section 2

Execution	Comments
Techniques of class management	
Presentation of materials: meaningful, appropriately staged	
Questioning: graded, directed appropriate	
Use of blackboard and other equipments	
Handling of text, dialogue, if presented	
Awareness and correction of errors	
Progress through the lesson, changes in activity, pace. Matching lesson plan with teaching	
Achievement of aims	
Personal qualities	**Comments**
Ability to establish	
Voice- audibility, ability to project	

Name and signature of supervisor /observer

Date: _____

Adapted from RSA (COTE) University of Cambridge, Observation Checklist

An Integrated Approach to School Development in Northern Areas of Pakistan

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Abstract

I started my career as a primary school teacher working for the Aga Khan Education Service in the Northern Areas of Pakistan. I was one of AKU-IED's first-cohort Professional Development Teachers (PDTs), and was the only course participant from the Northern Areas of Pakistan in the first MEd course. Having completed the MEd degree from AKU-IED, I went back to my parent institution and was assigned the management of 30 schools.

My post-MEd work, which reflects an integrated approach to school development, ranges from conducting professional development programmes for teachers and head teachers, increasing students' voice in school improvement-related decisions, revitalising school management committees, establishing resource centres, to increasing parents' (especially of mothers') involvement in school life. The saga of my work as a PDT portrays both successes and frustrations, and has interesting implications for those who may work under similar social, political and geographic conditions in the Northern Areas, or elsewhere in the country.

My work as a change facilitator for Aga Khan Education Service, the government and the English-medium schools in the Northern Areas was researched and a documentary called 'A New Beginning' was produced by an AKU-IED research assistant (Saeeda Nathu). This documentary presents interesting insights on multigrade teaching issues, community involvement in schools, orientation programmes to the school management committees, and the students' representative councils in schools.

I believe that sharing the significant episodes of this documentary, of 25 minutes, highlighting the achievements and challenges, and showing the school improvement work done in the rural, mountainous Northern Areas might be interesting and professionally helpful for other PDTs facilitating changes in schools.

Thus, I intend to present a paper (with the video) describing both my successes and challenges as a PDT in enacting school improvement in the Northern Areas of Pakistan.

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Introduction

Having an emphasis on female education at the core of its mission, the Aga Khan Education Service, Pakistan (AKESP), during the last several decades, has been playing a complementary and supplementary role in government's efforts both to provide access and to improve quality of education in the mountainous, rural Northern Areas of Pakistan (Shafa, 2003). Several factors such as the gradual move towards meritocracy, increasing competition for students' admissions in educational institutions and, consequently, parents' interest and involvement in schools resulted in a variety of school improvement intervention by the AKESP. Though there has been more emphasis on enhancing the individual capacity of teachers than improving the collective "change capacity of schools" (Hopkins et al., 2000), AKESP has been, nonetheless, making strategic interventions to address the community's concerns about the quality of teaching and learning in schools. The famous Field-Based Teachers Development Programme (FBTDP), originally designed for and implemented in the Northern Areas since 1983, the Language Enhancement and Achievement Programme (LEAP), the subject-specific and general refresher courses for teachers, and the Learning Supervisors system for on-the-job mentoring of teachers are some of the examples of AKESP's strategic initiatives taken during the last two decades.

The following paper portrays AKESP's intervention for establishing the first Field Education Office (FEO) in Gahkuch in 1996, one of the several AKESP initiatives to decentralize its operations to achieve its goals more efficiently. The aim of FEO Gahkuch was to improve and strengthen management as well as academic support to teachers and, therefore, to work closely with various stakeholders to improve the teaching-learning conditions in schools. Since I was the founding head of the FEO Gahkuch, the paper also presents a Professional Development Teacher's (PDT's) approach, his initiatives and challenges in introducing school improvement activities in the schools falling under the FEO Gahkuch jurisdiction.

The reasons for establishing the FEO at Gahkuch were two-fold: First, the AKES senior management believed that the first experimental FEO needed to be nearer to the central office so that its work could be closely monitored and ongoing support provided, secondly, Gahkuch is the central and easily approachable location for Ishkoman and Punial (two

tehsils of Ghizer district), both of which make one of the four administrative units of the AKES schools. FEO Gahkuch was, therefore, responsible to monitor and provide professional support to 175 teaching staff for almost 5,000 students in 27 schools. Since the roads were not cemented, access to schools consumed a lot of time. For instance, it would take three hours drive from the FEO to reach the remotest school in the Ishkoman valley and, at certain times, schools in various parts of Ishkoman would remain inaccessible because of road blockades.

I, with the help of the field team, which included two education officers, an office assistant and a driver, initiated several school improvement activities in Ishkoman and Punial AKES schools. The brief space here may not permit detail descriptions on each strategy and initiative, therefore, I intend to confine the discussion to what was captured in a documentary called 'A New Beginning', made by an AKU-IED research assistant, Saeeda Nathu, while she shadowed me in May 1998 to document the impact of AKU-IED's MEd programme on school improvement.

School improvement initiatives of FEO Gahkuch

Schools, as an integral part of the wider society, uninterruptedly influence and are influenced by the external world of schools. In order to address the teaching-learning issues, which make the core of the school improvement process, it is inevitable to simultaneously address the forces emanating from the inside and outside world of schools.. And this is what adds multi-layered complexity to the school improvement process.

Keeping in mind the magnitude of the challenge of making a positive difference in schools, the Field Team (FT) first conducted a needs analysis and gained useful insights from the schools' staff and the local communities on school improvement matters. The challenges identified were categorized as the "inside-school" and the "outside-school" issues. For instance, lack of morale and motivation of staff, their lack of pedagogical knowledge and skills, problems of physical school plan, and lack of management and leadership skills of headteachers emerged as the major "inside-school" challenges. Whereas lack of parents' interest in schools, micropolitics among the communities as well as between the communities and AKESP, central office-related issues, and community's lethargic attitude towards AKESP were some of the examples of the "outside-school" challenges to school improvement.

Based on our experiences of working in the organization and on our ongoing interactions with the various stakeholders, we decided to take an integrated approach to school

development. Our integrated approach to school development closely reflected the following "vibrant model for quality improvement" (Memon, 1999).

(Memon 1999)
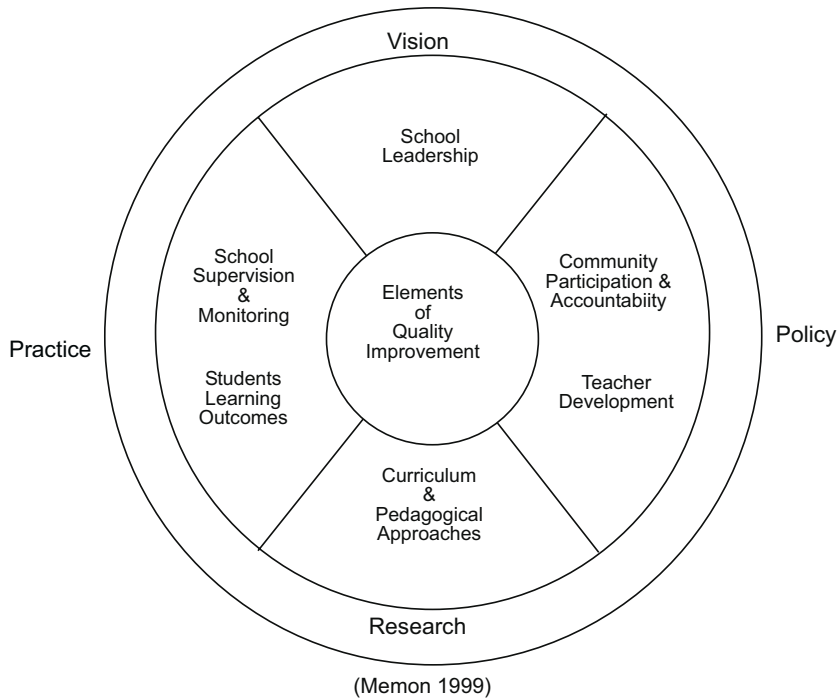
Specifically, we extended our efforts to provide teachers and headteachers with ongoing professional support, develop headteachers' leadership and management skills, take initiatives to improve students' attendance and their achievement in school, motivate the community representatives on the village education committees (VECs) to work as change agents, and work with parents and other community members (especially with mothers) to increase their awareness and role in schools. Using Memon's (1999) framework for quality improvement, I now describe some of the major FEO school improvement initiatives.

Curriculum and pedagogical approaches

By introducing teachers to various instructional approaches, we also helped them to develop a broader understanding of the curriculum and enrich the textbooks, where needed. There were various issues related to the curriculum and pedagogical approaches.

For instance, attaining the curriculum objectives was hampered due to lack of teaching and learning resources. Also, schools generally had fewer teachers than the number of classes, thus, curriculum implementation and increasing students' learning time emerged as serious school improvement issues. Consequently, curriculum implementation rather than curriculum enrichment became the priority to be addressed. We took the following initiatives to address these curriculum and teaching-related challenges:

Conducting multigrade teaching courses

In majority of primary and middle schools in the Northern Areas, there are more classes than the number of teachers available to teach those classes. This situation confronts both students and teachers with serious teaching and learning challenges. The multigrade teaching condition, a common phenomenon in numerous developing countries (Shafa, 1995), poses serious problems when teachers lack knowledge and skills to effectively deal with "more classes than the number of teachers available."

Upon my return from AKU-IED, I conducted multigrade teaching workshops for the primary and middle school teachers in various parts of the Northern Areas. Noting the effectiveness of these courses, the AKESP management decided to modify its Field-Based Teachers' Development Programme (FBTDP) and made the multigrade teaching course an integral part of the FBTDP. It was when AKESP was providing teachers multigrade courses through FBTDP, one of the World Bank missions, making a needs analysis to launch the 'Northern Areas Education Project' (NAEP), bought into the multigrade course idea and recommended to the government education department to follow the AKESP's multigrade course model for the NAEP school improvement initiatives. Since then numerous primary and middle school teachers representing the three education systems (government, AKESP, and the private English-medium schools) have benefited from the multigrade courses.

Introducing cooperative learning in schools

Although pedagogical concepts such as "group work" or "activity-based teaching" were not really new in the Northern Areas, introduction of cooperative learning structures immediately attracted teachers' attention and became a popular and oft-used teaching strategy. Cooperative learning components such as "positive interdependence", "individual accountability" and "social skills" (Kagan, 1992) sparked an enthusiasm in teachers because these components helped them improve students' interest, motivation and their involvement in learning activities.

Introduction of cooperative learning structures in schools proved to be an appropriately grafted strategy as it also coincided with and reinforced the rural development strategies (for instance, using the collective wisdom for conflict resolution, decision-making and problem- solving) by other Aga Khan Development Network (AKDN) institutions such as the Aga Khan Rural Support Programme (AKRSP) (AKRSP, 1984). It seemed that the AKDN social change agencies took an integrated approach to improve the living conditions of the people of the mountainous, rural Northern Areas. Introduction of cooperative learning was thus a right initiative at the right time in the context of the Northern Areas.

Improving students' learning outcomes

Students' learning is at the core of all school improvement initiatives and, therefore, it closely reflects the quality and professionalism of teachers and the overall performance of schools. Because the teaching approaches in the FEO Gahkuch schools characterized the "transmission-mode", students developed the rote learning skills rather than reflecting on raising questions and understanding the concepts. Also, there were no opportunities for students involvement in school life, like talent shows, to improve the teaching-learning conditions in schools.

We took several initiatives to improve students' interest and their motivation in schools to enhance their learning outcomes. Two of the major initiatives are described below:

Establishing teacher resource centres

In order to address the lack of teaching resource issue, the FT encouraged schools to develop and preserve teaching aids in schools. Teachers were facilitated in developing teaching aids from the low-cost and no-cost material, and schools were also helped with financial resources to buy the most-needed teaching aids. In some schools, the local community assisted in establishing resource centres by donating various furniture items such as tables, chairs and cupboards, whereas in other cases they came forward for doing manual work like repairing and whitewashing classrooms.

Resource centres preserved various kinds of resources, including subjects-related teaching and learning resources, models, charts, maps and artefacts, received from some of the community members. Some resource centres had specific Learning Corners, where teachers kept subject-specific teaching aids. In multigrade situations, teachers sent students of a particular class to these Learning Corners whenever they remained busy

teaching other grades.

Students' representative councils (SRCs)

The primary goal of the SRCs was to increase students' voice in school improvement-related decisions, and provide them an opportunity to "make thoughtful choices and adjustments" (Grace, 1992). Establishing an SRC in a school also provided students an opportunity to democratically elect their representatives. One student with the majority of votes from each class was elected as a member to the SRC. Number of SRC members varied from six, nine, to eleven for the primary, middle, and secondary schools respectively. The SRCs contributed to schools' improvement by:

- Assisting in teaching, especially when there would be no teachers to attend classes;
- Establishing a welfare fund to assist the needy students;
- Keeping an eye on and ensuring the physical cleanliness of school premises;
- Acting as monitors and maintaining discipline in classes;
- Playing their role to improve students' attendance;
- Assisting in arranging various events and celebrations at schools.

The SRCs were also given opportunities to receive and brief visitors on the working of schools. In cases where students remained absent for longer than three days, SRC members went to the absent students' homes and motivated them to attend the schools. In other cases, the SRC members washed the hands and faces and combed the hair of younger students who came to school untidy. In certain schools the SRCs had a box which contained some basic necessities such as towels, soaps, combs, hair oil, pencils, pens and erasers etc. Both teachers and SRCs briefed students to take stationery items from the SRC box whenever they forgot to bring or lost theirs, and return them at the end of the school day.

Besides establishing resource centres and students representative councils, the FT made wide-ranging efforts to improve students learning. For example, during our class visits we found that an overwhelming number of students had managed to pass their examinations without necessarily having the knowledge and understanding of the key concepts, which they should have learnt in the previous grades. This posed serious challenges to teachers in helping students understand and learn various concepts, thus, this situation required remedial teaching arrangements. As a result of our dialogues with teachers and headteachers, several teachers in schools volunteered to run remedial teaching classes after school hours. In some other schools, additional free coaching was made available to students

during the summer and winter vacations. Teachers' additional, volunteer efforts to provide coaching not only improved school results, but they also brought a positive change in the parents' and community's perceptionof the AKES schools.

Moreover, we held frequent conversations with students to inform them about the opportunities and challenges that they might encounter in their future educational endeavors. By doing so we helped them raise their motivation and give more time to their studies even after school hours. There were clear indications (e.g. parents' and teachers' feedback) of students' increased motivation in their studies. For instance, because of our ongoing dialogues with students, they utilized their time from and to schools to have educational conversations with their friends, or to learn concepts from their books. While students taking their cattle for grazing in their gardens or doing their household work (taking care of their siblings) showed interest in their books.

Community participation and accountability

In order to ensure holistic development of students, schools need to work in close collaboration with parents and the school community. "School-community relations involve working with community councils, community development associations, parent-teacher associations, and other local organizations that have an interest in the schools" (Chapman, 2003:12). Community participation in school life is getting an increasing recognition worldwide and the school improvement research is replete with evidence of community's positive impact on school improvement (Bray, 2000). The AKESP, too, has long realized the significance of the community's role in the promotion of education. Community, therefore, has a say at the various levels of the AKESP management to formulate policies that are in line with the organizational goals and the community's expectations.

However, developing a sustainable system for community participation is much easier said than done, because it requires parents and the community members to see themselves as partners with the AKESP and also accept equal responsibility for the access, quality, and sustainability of educational initiatives. Our frequent interactions with teachers and parents reflected the fact that communities generally looked to schools for their children's education, and would not play an active role in promoting and improving education. We took several initiatives to enhance community participation in schools, and specifically focused on the following strategies:

Involving mothers in their children's schooling

The need for the multi-dimensional development of students requires that teachers should involve key people having an influence on children's life and, thereby, on their schooling. Therefore, "partnership between parents and teachers has become enshrined in educational policies" (Reay, 2000), both here at home and abroad. Since fathers, in the context of the Northern Areas, usually remain outside home for various reasons (attending offices and working in farms), mothers, generally housewives, have a significant role to play in their children's education. Realizing their critical role in improving schooling, the FT took initiatives to improve mothers' understanding of their children's education and, thereby, increased their involvement in school activities.

For the first time in the Northern Areas we initiated the idea of celebrating Mothers' Day in schools, where we conducted sessions on how both educated and uneducated mothers could contribute to their children's education. In several instances, mothers contributed in kind and cash for school improvement. In other cases, they volunteered for manual work in repair and maintenance of schools. In sum, mothers' involvement in schools considerably improved their image of the AKESP schools, and helped narrow down the previously existing gap between schools and parents.

Revitalizing the Village Education Committees (VECs)

Two groups of people jointly manage the AKESP operations: First, the honorary managers (right from the Chairman, AKESP, to the VEC members at the school level) are selected for three years and they provide voluntary support to facilitate and decide on the strategic direction for the AKESP; secondly, the professional managers (right from the Chief Executive Officer to the teachers), who give their full-time, professional knowledge and skills to help the institution achieve its goals. The VEC, formerly known as the School Management Committee (SMC), consists of a certain number of parents and the head teacher, and is expected to provide honorary and community-related support to schools. The size of VEC varies according to the size and status of the school. Since the school headteacher works as the secretary, and in case of high schools two to three more teachers are selected as members on the committee, the VEC brings both the professionals and the honorary workers closer together to address the school-related issues.

The needs analysis reflected that the honorary set-up in general and the VECs in particular had ambiguity about their role. Many volunteers saw their role as an authority rather than a responsibility. For instance, instead of working as community educators and

leaders to help parents understand their role in their children's education, many honorary workers tried to step into the work of professionals: they tried to influence the appointments, transfers and promotions of staff. In other cases, some of them tried to do academic monitoring rather than providing community-related support to schools. At the FEO Gahkuch, we made efforts to revitalize the VECs: First, by creating a sense of the need for collaborative efforts and, secondly, by conducting numerous orientation programmes for the honorary workers to help them understand their role as community leaders. As a result, there was notable improvement in how they enacted their role as community educators.

School leadership

School improvement process is inextricably linked with school leadership. Sammons et al. (1995), for instance, see leadership as one of the most important characteristics of schools and argue that there is little evidence of effective schools with weak leadership. Traditionally, discussion on school leadership had a focus on headteachers alone, but with the newly emerging trends in school improvement anyone (be it a student, a teacher, or a management staff) who influences others to use their creative skills for school improvement can be a school leader (Barth, 1990). At the FEO Gahkuch we conducted sessions for headteachers on leadership development, and particularly emphasized the idea of shared leadership in schools. In addition, these leadership development sessions focused on improving headteachers' coaching and mentoring role in school improvement.

The impact of headteachers' leadership skills was visible from their various school improvement initiatives. For instance, many of the headteachers encouraged a culture of shared leadership by increasing teachers, students, and parents participation in school improvement-related decisions. The SRCs, various committees of teachers, and the VECs involvement in school were the signs of headteachers' shared leadership. However, though they showed interest and vigour, not all headteachers equally understood the need and philosophy of shared leadership. There were some headteachers who were politically motivated, expecting immediate rewards (good grades in their performance appraisal, promotions or increase in their salary) for their school improvement efforts. It was an enormous challenge to help such heads to understand the need to take school improvement initiatives, without linking them to personal and material gains.

School supervision and monitoring

Though the supervision and monitoring of schools needs to be improvement-oriented,

teachers in the Northern Areas seem to have developed negative connotations about the supervision and monitoring. They generally saw supervisors as "policemen" visiting schools to find weaknesses and, as a result, to penalize teachers and headteachers for their shortcomings. On the other hand, supervisory staff, too, believed in their "seniority" and "authority" to take actions against their subordinates. Replacing this top-down, command-driven system of monitoring with supervision for professional growth and improvement emerged as a huge challenge. The shift in the supervision style meant bridging the gap and creating trust between the FEO team and the school staff. It also required the supervisory staff to play their role as caring professional guides rather than harassing teachers for their shortcomings.

In switching over to a more professional and more improvement-oriented style of supervision, we took various trust-building measures. For instance, we repeatedly communicated to teachers that we were there to help them in their professional (and personal) challenges. Also, we avoided surprise visits to schools and to classes, rather we made negotiated, pre-planned visits. We also introduced and encouraged the style of having pre- and post-observation conferences with teachers (and headteachers) both to determine a focus for the visits and to share and reflect on the observations. By focusing more on their successes, achievements, and potential for improvement, we were able to create a situation where teachers took the lead to invite us to their classes to show us their achievements. Teachers also phoned us or sent us letters, requesting us to visit them and address their content-specific challenges.

Generally, our school-visit model included the following activities: For the planned visits, we went to schools before the morning assembly. Observed teachers' lessons during the entire school day (8-9 lessons) and shared feedback to individual teachers after the school hours. We then conducted a professional development session on a common topic of interest for all teachers and in the late afternoon met the VEC to address school- and community-related issues, if any. The issues that required meetings with the VECs would be about students' tuition fee, school repair and maintenance, celebrating various events at schools, absenteeism, and visitors to schools.

Conclusion

Is the foregoing narrative a success story of a PDT's school improvement initiatives? The answer is NO. I worked as the head of the FEO, in a fairly autonomous environment for decision-making and for initiative taking for more than two years, before I was transferred to the central office. Undoubtedly, our work style (that of playing a mentor's

and a community developer's role) had made a significant difference: it improved teachers, students and community's image of the AKESP schools, motivated teachers to put in more time and efforts in their professional obligation, decreased teachers and students absenteeism, enhanced students' sense of ownership of schools and, above all, it helped narrow down the gap between schools and communities. Though I don't have any handy, hard evidence, but based on my interaction with various people, I have an impression that most of the school improvement initiatives taken during our two years have died down. It would require a systematic investigation to find out why the school improvement initiatives, which once sparked an interest and motivation within the school community, withered away.

Although some of the working conditions remained unaltered, several of them changed. One of the members on the core FT (of three people) still works in the same FEO. The VECs and other community leaders were changed after completing their three years and new people came on board. More importantly, the central office leadership, which encouraged us to take creative steps for school improvement, changed which, I believe, further compounded the challenges for the new FEO team to keep the momentum of school improvement.

However, the lessons learnt from this rise and fall of the school improvement enthusiasm and dedication of the people involved have significant implications both for educational managers and for the educational change facilitators. For instance:

- School improvement initiatives require considerable time, constant tending and ongoing reflection by all concerned people in order for the changes to take roots;
- Change of key personnel adversely affects the process of school improvement;
- Even when people seem enthused and take interest in school improvement, they may not yet deeply believe in the change process, and, thus, may take a U-turn when the forces for change dissipate;
- Each stakeholder in the schooling of the children (whether literate or illiterate, poor or rich, male or female, young or old) has a very significant role in school improvement;
- Resources help and accelerate but cannot block the process of school improvement. Right attitudes and strategic interventions are more important than material resources;
- Without a change-loving and improvement-oriented mind at the top of the hierarchy, there is the least likeliness of improvement at the lower level ;
- Sustainability of school improvement also demands improving the immediate wider world of which the school is a part.

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PDT PATHWAYS

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Abstract

After completing the Master of Education (MEd) at Aga Khan University Institute for Educational Development (AKU-IED), most Professional Development Teachers (PDTs) enter a foggy zone where they have to grope to make a place for themselves. This paper is based on the experiences of two PDTs who found different paths to work on teachers' professional development.

The first PDT works as a school-based PDT, and hence the experience focuses on classroom teaching, student assessment, working with teachers at the school and the broader experience of working on professional development programmes. There is also an element of outreach as this PDT works with teachers of religion at the Ismaili Tariqa and Religious Educational Board (ITREB).

The second PDT's experiences are working with the Professional Development Centre (PDC) and its training programmes in the whole region of East Africa.

This paper looks at how the teachers translated elements of what they learn in professional development programmes into their classroom practice. It focuses on the differences in the teachers' attitudes towards teaching and their pupils, the teachers' classroom practices, their efforts at reflection. Evidence of impact is in the form of students' assessment scores, school results, teachers' comments during discussions, comments by head teachers and comments by parents.

The paper concludes with tentative suggestions as to why the impact was not as strong as it could have been. It looks at issues of school management and administration, lack of structures to support the teachers in school, and to some extent ineffective follow up of the professional programmes.

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Introduction

After completing the MEd programme at AKU-IED, most of the PDTs entered a very foggy area where they had to grope around to make a place for themselves.

This paper is based on the experiences of two PDTs who found different paths to work on teachers' professional development. One PDT works as a school based PDT and, hence, her experiences are related to classroom teaching, students' assessment, working with teachers at school and the broader experience of working on professional programmes like the CE Programme. There is also an element of outreach through involvement with Ismaili Tariqa and Religious Education Board.

The second PDT's experiences are with the PDC and its training programmes. Her experiences cover the whole region of East Africa where the PDC conducts its programmes.

Though we took different paths, we travelled the same road of professional development. Through this paper we will share our experiences in working with teachers, some successes and some challenges. We feel that the impact of our work has been felt through different channels:

- Teachers' attitudes towards professional development
- Teachers' attitude towards teaching
- Teachers' attitude towards pupils
- Teachers' Classroom Practice
- Outreach

Successes

Teachers attitude towards the CE programmes

Many of the teachers who go through the CE programmes rate them very highly. Many of them find these programmes very unique yet very enriching to their teaching profession. In relation to this, one teacher in a speech read on behalf of all the CPs during a certification ceremony of CE Programme -English 2002 said:

> I have attended several courses. Some of them took a whole academic year, while others took only a few weeks. But the Certificate in Education Programme (CE Programme) has proved totally different. It has affected

me to the core, changing my perceptions about myself as a teacher. It has, within a very short time, changed my practice and long cherished and entrenched philosophy about teaching, defying the old adage that 'you can't teach an old dog new tricks.' What is the secret behind the CE Programme? Why is it so powerful, so persuasive that within a short time, it has not only changed me but also some of my pupils and colleagues.
(PDC Bulletin, Vol. 2 Number 1, March 2003)

The above quotation sums it all up on what many CPs feel about the CE Programmes in East Africa.

Teachers' attitude towards teaching

Attitude towards teaching profession

On the onset of all our CE Programmes, we begin the process of reconceptualisation with a session on "Talking about teaching" and a question "Why did you become a teacher?" More often than not the responses from the majority of the course participants is that, teaching was not a career of their choice, it was something they did because that was the only employment opportunity available at that time, or that they were influenced by parents who had been teachers. Most of the participants think of teaching as a job that needs to be done and it is a source of income. But later, the same participants talk about teaching as a "mother of all professions" as it is because of the work of teachers that people can go into so many prestigious professions. They talk of teachers being "the mirrors of society" as teachers reflect the values of society and try to inculcate the same values in the pupils they teach. They also talk of teachers being the "lamps that dispel the darkness and help children to come to the light" We feel that the programmes AKU-IED, and we conduct, help the teachers to view themselves and the teaching profession in a different and more positive light. When teachers value the work they do, it builds their self esteem and confidence and they are encouraged to do their best for the children they teach.

Attitude towards being observed by colleagues.

The second phase of the Certificate in Education programmes is a field based phase when the CPs are back in the classrooms trying to put into practice the new strategies they acquire in Phase 1. During this phase, they are observed and supported by the PDTs. The CPs who had worked in a culture of "inspection" where the only time they are

observed is when they are being inspected and evaluated, initially look upon the Phase 2 observations as inspection. As a result, they tend to feel threatened and totally ill at ease at the prospect of being observed in their classrooms. Colleagues of CPs being observed are full of sympathy for their predicament. When I was at the Aga Khan Primary School in Mombasa, I heard teachers calling out to the CPs who were going to be observed, "Good luck with the assessment, don't worry, you will do well"

However, by the end of Phase 2, and after the programme the attitude of the CPs was very different. They realized that lesson observation was actually helpful in improving their classroom practice. An instance I would like to share here is when I went to the SOS primary school in Mombasa four months after the completion of the CE Programme for teachers of Mathematics. One of the CPs of that programme had just come out of a colleague's (not a CP) classroom where he had been doing a demonstration lesson to show the use of a teaching aid he had prepared. When he saw me, he exclaimed that he wished I had come earlier so that I could have observed him.

The situation at Loreto Primary School in Mombasa now has a very healthy working environment where teachers observe each others' lessons when they are not teaching themselves. There seems to be evidence that in some schools, the attitude of isolation and rivalry is slowly dissolving, and an attitude of mutual support and encouragement is taking its place. We can see our objective of promoting collegiality among teachers taking a concrete form beyond the confines of the programmes.

Teachers' attitude towards the pupils

<u>Use of children's ideas</u>

During the follow-up workshops, one thing that keeps on coming up is the change of teachers' attitude towards their pupils. For example CPs in Kampala agreed that the programme made them realize that children, if given opportunities can come up with many relevant ideas related to what is being taught.

Specifically one Science teacher cited a situation where she had only four points in relation to a concept she was teaching. However, when she asked the pupils, they came up with many more relevant points that she had never thought of. She therefore started learning from the children and used their ideas in the classroom teaching and learning process.

Children's contribution to teaching and learning resources

The above same CP talked of how she has realized that she can involve the children in the development of teaching and learning resources. She cited a day when one pupil brought a bird, which she used to teach about birds in the classroom. This incident made the lesson very enjoyable and the pupils were very excited.

The above two examples seem indicate that in some CPs' classrooms, there is an aspect of pupils ownership of their own learning.

Discontinuation of the use of the cane

Some of the CPs, after the CE Programme programmes are realizing that to be able to create an enabling classroom environment, where children can learn, the use of the cane should be avoided. Two teachers, one in Kampala and one in Mombasa, who strongly believed that children could not learn without the use of the cane confessed in follow-up workshops that, since the completion of the programme, they had ceased to use the cane in their classroom and the children had become more free to participate than it was before when the cane was in use. In fact the Kampala CP had gone as far as conducting a workshop in her school for the other teachers advocating against the use of the cane in order to promote pupils leaning.

Classroom practice

PDTs own classroom practice

My own classroom practice has undergone changes after my MEd at AKU-IED. I used to enjoy being the focus of the students' attention, the person in charge of everything that went on in the classroom. "Teacher talk" was the norm in my classes a lot of the time. I used to believe that the more I could tell students the more they would learn.

Once I resumed teaching at my school, my focus changed. Now it was the students who were the focus, my objective was to enable them to create and arrive at their own understanding. My subject specialization is Literature and actually my teaching became a lot more exciting and challenging. My lessons are lively with plenty of discussions where the students air their views and challenge each other's ideas. Therefore this has led to more students opting to study literature than before.

Students' performance

One of the major concerns of the CPs during the CE Programmes is that the new approaches are "time consuming" and they are not sure whether the approaches will yield good examination results. What we are asking them to do is abandon "tried and tested methods of teaching which bring good examination results" When the CPs try out new strategies in their classes, they are indeed taking a risk. One of the participants of the VTP2000 - English told us that in the national examination (KCPE) the mean grade for her students was actually higher in 2000, 2001 than it had been in 1999. For her and her school, (a government school in Mombasa) this was a great achievement. The head teacher was so pleased that he decided that the teacher should always teach the examination candidates as her results were so good. She attributes her rate of success to the strategies she now uses in class, strategies she learnt at the CE Programme.

Another success story was related by another teacher of a government school in Mombasa, who attended the CE Programme 2002 - Mathematics. This teacher said that after she started to use strategies she had learnt at the CE Programme the lowest mark her students scored was 45% compared to 25% which was the lowest score before her participation in the CE Programme.

Use of cooperative learning

One of the "visible signs" of participation in a CE Programme is the seating arrangement in the class. A big majority of the CPs arrange their students in groups. This group arrangement has now become a regular feature of CPs' classes. They are using cooperative learning with varying degrees of success. The heartening thought is that they are definitely trying to implement cooperative learning. Many of them feel that cooperative learning helps them in classroom management. One CP at one of our co-operating schools (private school) said, "Now the pupils themselves help to maintain discipline as group members monitor behaviour. Pupils help in teaching the group members who have not understood the teacher."

Use of visual aids and displays

Most of the course participants pick up the idea of using visual aids and displays in their classes during the CE Programmes. This has become evident during the monitoring exercises which are undertaken six months after the CE Programme. Teachers also display students' work. One head teacher of one School in Mombasa commented "We always

used to tell our teachers to put up interesting things on the class bulletin boards. But what used to happen is that the teachers would cover the boards with some posters and these would remain for the whole year even when they became tattered. Now the teachers are asking for materials with which they make their own aids and displays and these are on the board for a while and then new ones are put up. We also see some of the things the pupils are doing on the boards like compositions and graphs and so on."

One of our CPs of CE Programme 2002 - Mathematics, had taught the concept of time to her Class 3 just before she came to the CE Programme and felt that her pupils had found the concept very difficult as their test score showed. During the first phase of the mathematics CE Programme, she appreciated the idea of using teaching aids to explain concepts. During the practicum in Phase 2, she re-taught the concept now using visual aids to teach time and was very happy that the children understood the concept so much better. She said, "Now you can ask them any question on time and they can answer."

Course participants becoming more "marketable"

One of the rather unexpected outcomes of the programmes is that the CPs who attend our programmes and are doing well in their own schools are actually being lured away by other schools. It is being realized that these teachers are doing extremely well and the other schools (who are as yet not our cooperating schools) are offering attractive packages in order to get their services! Two private schools in Mombasa and one private school in Nairobi have lost their CP teachers in this way. The proprietor of one of the schools said, "Believe it or not, the VT certificate is a very powerful tool which the teachers have to get better paid jobs." He had lost two teachers after the 2001 programme and was bitter about it. Now the cooperating schools are devising ways of holding on to their teachers so that they remain in their schools. Some of the government school teachers have been promoted to the post of deputy head teachers after they have gone through the programmes and started doing better in their classes. In Mombasa and Nairobi, when schools are considering job applications from teachers, preference is being given to teachers who had attended CE Programmes.

Although this mobility of teachers away from the sponsoring schools defeats our purpose of building capacity for school improvement, it does seem to indicate that teachers are benefiting from the programmes. In this case there is negative but also positive impact of the programmes.

Outreach

Two important links are being made from last year. Last year we invited participants from Kenya School Improvement Programme (KENSIP), an Aga Khan Foundation project. The participant who came for the CE Programme for Mathematics was a Programme Officer who worked with a number of schools on the outskirts of Mombasa. His participation in the CE Programme was an important step in forging links with KENSIP and since he is also working with teachers, the ripple effect of the CE Programme will, hopefully, take place. It is as yet too early to talk about impact in that link.

In the CE Programme in Zanzibar this year, two of our understudies belong to Teacher Resource Centres (TRC) where they are working as teachers advisers. They discussed with us how they were going to use the materials of the CE Programme to do workshops with their clusters of teachers in their resource centres. It is too early to talk about the impact of these outreach efforts, but we are optimistic about the ripple effects of the CE Programme through these outreach efforts.

A second link that has been formed is with ITREB, Mombasa. We had invited participation from ITREB and they had sent one participant in 2000. Since March this year, I have been appointed the member responsible for training of the ITREB teachers. In this capacity I conduct workshops on various areas for them. The teachers are volunteer teachers and not professionally trained teachers. These teachers find the training sessions very useful and are using quite a lot of activity based teaching in their classes. One interesting observation is that these teachers have no prior training and are "fresh" with no deep rooted beliefs about teaching. They find it easier to absorb new ideas as they have not come with preconceived ideas about teaching and learning. It has been noted that now more children are attending religion classes than in the past, so the teachers must be doing some good work.

CP associations

On completion of each of our CE Programmes, the CPs form an association. Though the formation of these associations is still it its infancy stage in the region, the fact that teachers can come together after the CE programmes and agree that form associations where they can still support and learn form one another and thus continue to professionally develop is something to be applauded. This indicates that teachers value what they the knowledge and skills they acquired from the programmes and would like to continue using these in their classrooms.

In different bases, the Associations are at different stages of formation.

Dar-es-Salaam: Association of Professional Teachers

The executive committee has come up with the constitution that has been presented, amended and endorsed by the members of the association.

The sub-committees representing the different subject groups are in the process of finding out what activities teachers can involve themselves in, in terms of relevant workshops, etc.

A patron has been identified, who is willing to assist the association both professionally and finically.

The process of registering the association is going on.

Nairobi: Professional Development Teachers Association

The executive committee has come up with a constitution waiting to be presented and hopefully endorsed by the members in September. After this, registration will be done.

Kampala, Mombasa, Zanzibar

In the above bases, the executive committees are in the process of formulating a constitution for each of the associations.

Challenges and concerns

CP associations

Mobilization of teachers

It takes a lot of time and energy to mobilize teachers to attend the association meetings. At times, meetings are cancelled due to lack of quorum.

Funding

Funds are required by these associations if they are to organize and carry out activities for the teachers. The subscription fee to be paid by both the teachers and the schools is

inadequate for the above purpose.

However, it is hoped that after the registration of the associations donors like the British council will be approached for support

PDT support

The associations are coordinated by PDTs who have full time jobs in schools. It is therefore a challenge for them to find time to organize and conduct the associations meetings.

Ripple effect of the CE Programme

Upon completion of the programme, CPs are expected to share whatever they learnt from the programmes with other teachers in their respective schools. However, this is not happening to the scale that we expect it to. This may be happening due to lack of lack of appropriate and relevant structures in the schools that can enable the CPs to work with other teachers in their schools. The PDC is therefore proposing to incorporate the concept of mentoring in the CE Programmes.

In addition, starting with this year's programmes, head teachers will have to participate in some sessions of action planning. This might make the head teachers to have obligations of ensuring that what has been planned for is implemented in their schools.

School inspectors

In government schools, school inspectors appraise and evaluate schools and their teachers. One of the aspects they evaluate is the teachers' classroom teaching.

From the CPs comments on school inspectors, it appears that they (inspectors) still belong to the old school of thought of traditional teaching. As a result, when they observe the CPs lessons, they find their teaching methods contradictory to their beliefs. These inspectors question and criticize the CPs teaching methods both verbally and in their reports. This therefore sometimes discourages the CPs from implementing more of the new approaches in their classrooms.

Due to the above concern the Ministry of Education and Culture of Tanzania with initiative from one of the PDTs who works with this ministry in the department of teacher

education is planning to conduct a course for school inspectors to make them aware of the current trends in education.

Constraints of language

CE Programmes in East Africa are conducted in English language. However, in some parts of the region the medium of instruction in schools is Kiswahili. Therefore the English proficiency level of some of our participants is considerably low. At times the CPS have difficulty comprehending concepts of the course. Consequently this may hinder some CPs from implementing the concepts leave alone sharing them with other teachers in their schools.

Due to the above challenge, sometimes both English and Kiswahili languages have to be used during the course. One may wonder whether these concepts that are translated from English to Kiswahili will be understood appropriately and have the same impact on the CPs if they were understood in English.

Reflection

One question, which has been nagging at us, is the question of Reflection. The CPs do not maintain their reflective journals after the programme. Does this mean these teachers are not reflective teachers? Is a written reflective journal the only evidence? A lot of the impact of the CE Programmes we are conducting is not visible in the concrete sense, a lot of the impact is felt in the change of attitudes of the CPs. The final question, when we cannot provide concrete evidence of the impact, does it mean that the impact is not there?

TRACKING GRADUATES OF AKU-IED'S MED PROGRAMME: THE CLASSES OF 1999, 2000 AND 2002

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Abstract

In each of the years 1997, 1998 and 2000 a new cohort of course participants joined the two-year MEd programme at the Aga Khan University's Institute for Educational Development in Karachi, Pakistan (AKU-IED). Some two years later 87 or 92% of the entrants graduated from the programme and returned to their respective employers or systems. This paper focuses on the employment of and roles played by these 87 'completing' course participants before they entered and then after they exited from the AKU-IED MEd programme.

The paper is based on interviews with the 87 graduates carried out some one year and some two years after programme completion for two of the cohorts and some eight/nine months after completion for the most recently graduated cohort. The paper charts changes in numbers in such categories as School-based educators (e.g. teachers; head teachers) and Non-school-based educators (e.g. teacher educators; university teachers) and asks whether these numbers appear to be affected by the regional and system background of graduates; their roles at entry to the programme and length of time since programme graduation.

Discussion is focused on issues related to 'flight from the classroom' and on the need to acknowledge complexity in the design and execution of studies of programme impact.

Introduction

In each of the years 1997, 1998 and 2000[1] a new cohort of students or course participants (CPs) joined the two-year Master of Education (MEd) programme at the Aga Khan University's Institute for Educational Development (AKU-IED) in Karachi, Pakistan. In all, there were 95 such entrants and the group sizes entering each of the programme years were 32, 31 and 32 respectively.

Then, in each of the years 1999, 2000 and 2002, these cohorts (or at least their residual members) graduated from their respective programmes and returned to their employers, workplaces or systems. The completion or graduation rate was high with 87 of the original 95 (30/32; 29/31; 28/32) or 92% satisfying programme requirements to emerge as Master of Education graduates. This paper focuses on the employment of and roles played by these 87 'completing' course participants before they entered and then after they exited from the AKU-IED MEd programme.

Before examining the data, four features of the MEd programme and of AKU-IED's programmes are outlined that might, at least in part, influence or determine some of the results of this analysis.

First, CPs entering the programme are sponsored by their employers or employment systems. Thus, rather than being individual entrants to the programme, they are employer-sponsored entrants and generally they contract with their employers to remain in their service for a certain period (typically three years) after programme completion. This factor would be expected to introduce a certain stability in the pattern of what happens to graduates in the first two or three years after graduation.

Second, because the programme itself was originally conceived as a cooperation between employers and AKU-IED, there is also typically a further contract between the employers and AKU-IED in which the employers undertake to release their employees (to AKU-IED or its associated agencies) to engage in the professional development of other teachers for perhaps 50% of their time after their graduation and programme completion. In this role, programme graduates are known as Professional Development Teachers (PDTs) and, in at least some of the employer systems, 'PDT' has itself become an employment category or occupational descriptor.

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1 In the year 1999 (at the end of IED's Phase 1) there was no intake to the MEd programme.

Third, before examining **actual** outcomes of the MEd programmes, it is important to describe the aims or **intended** outcomes of the MEd programme itself. In this case, the classes of 1999 and 2000 undertook the same MEd programme as each other whilst the class of 2002 undertook a substantially modified programme. The aim of the MEd programmes offered to the classes of 1999 and 2000 was 'to prepare a cadre of experienced mid-career teacher educators, educational leaders, researchers and agents of change' who would be committed to bringing change in their respective systems (Professional Development Teachers' Information pack, 2001, p.1). The aims of the restructured MEd programme for the class of 2002 were threefold-'[a] programme graduate would be an exemplary classroom teacher; an effective teacher educator and a competent beginning researcher…' (Handbook, Class of 2002, p. 9).

Fourth, as part of its commitment to ongoing professional development, AKU-IED has been able to sponsor some of its MEd graduates to undertake doctoral studies, in most cases through IED's partner universities of Toronto and Oxford. Thus, one would expect a small number of programme graduates to be engaged full-time in higher education.

The data were collected in an ongoing study of Course Participants in these three groups. The results reported here are both from the earliest interviews with members of the groups (during the period of their studies at IED) and from more recent field-based interviews as detailed in Table 1 for each of the groups.

Table 1: Approximate timings of post-IED data-collection for all three cohorts		
Cohort	**Phases of interview**	**Time of data collection**
Class of 1999	Field-based interview 1.	Jun-Aug 2000.
	Field-based interview 2.	Jun-Aug 2001.
Class of 2000	Field-based interview 1.	July-Sep 2001.
	Field-based interview 2.	Nov-Jan 2002.
Class of 2002	Field-based interview 1.	Apr-Jun 2003.

Entrants to the programme

Table 2 shows the most general categorization of the areas of work of the 87 course participants (CPs) at the time of their entry to their respective MEd programmes.

Table 2: Categories of work being undertaken by MEd Course Participants at their entry to the programmes in 1997, 1998 and 2000.		
Nature of work	**Number**	**Percentage**
School-based educators	60	69%
Non School-based educators	19	22%
Education officials or managers.	8	9%
FT in Higher Education.	0	-
Outside education/Other.	0	-

From Table 2, a very clear pattern is visible. First, and unsurprisingly, for entry to a Master of Education programme, just over 90% of all entrants are educators or teachers whilst just under 10% are education officials or managers. A fuller description of the roles played by the educators is covered below. The Education officials or managers were in such roles as Assistant Sub-District Education Officers in government education systems; Field Education Officers in the Aga Khan Education Service or in managerial roles in other organizations. For example, one government employee described his task as an officer in Planning and Development as being to do,

> … some inspections…because I was more linked…with the development, like going for seeing sites, or getting a building approved, or sometimes contacting with Communications and Works department [etc]…(4I/56)

Similarly a 'manager' outside the government sector described his role thus:

> …they promoted me to the head office…and I was working there for one year …working in the office and I was dealing with logistics, and the management in the offices… (3I/23)

Table 3 is an expanded version of Table 2. It shows an elaboration of the general categories of School-based educators and Non-school-based educators.

Table 3: Elaborated categories of work being undertaken by MEd Course Participants at their entry to the programmes in 1997, 1998 and 2000.		
Nature of work	**Number**	**Percentage**
School-based educators	60	69%
-Teachers	50	57%
-Head Teachers	8	10%
-Heads of Department	2	2%
Non-School-based educators.	19	22%
-Teacher educators	13	15%
-University teachers	6	7%
Education officials or managers.	8	9%
FT in Higher Education.	0	-
Outside education/Other.	0	-

What Table 3 shows is that the vast majority (50 of 60, or 83%) of the School-based educators were classroom teachers whilst very much smaller numbers were school-based as either Head Teachers (14%) or Heads of Department (2 of 60).

Of the nineteen Non-school-based educators, 13 or 68% were Teacher educators working in such settings as the government sector's Provincial Institutes of Teacher Education or as Master Trainers in the AKES system.

The remaining one-third of the nineteen Non-school-based educators were University teachers, all of them coming from Central-Asian countries and mostly involved in the teaching of languages at their universities. This category is reflective of particular cooperative arrangement between IED and State Universities in both Kyrgyzstan and Tajikistan (Osh and Khorog).

After exit from the programme

After completion of their programmes, graduates returned to their own contexts and started working in a variety of different capacities. As Table 1 showed, in the case of the classes of 1999 and 2000 we were able to interview their members on two occasions after their departure from the programme. In the case of the class of 1999, these occasions were some 9/11 months after programme completion and again some 10/12 months later; in the case of the class of 2000, these occasions were some 10/12 months after programme completion and again some 14/16 months later; in the case of the class of 2002, we were

able to interview them once approximately eight/ten months after the completion of their programme in April/Jun of this year. However, in all cases, if subsequent information emerged that allowed us to update our data, then this has been done.

Table 4 shows the categories of work being undertaken by the 87 programme graduates at the time of the most recent information.

Table 4: Categories of work being undertaken by MEd graduates after their exit from the programme and at time of most recent update.		
Nature of work	**Number**	**Percentage**
School-based educators	35	40%
Non-School-based educators.	34	39%
Education officials or managers.	13	15%
FT in Higher Educationn.	2	2%
Outside education/Other.	3	3%

Table 4 shows that the predominant categories of work being undertaken by MEd graduates are as School-based or Non-School-based educators, with each of these categories accounting for me 40% of all participants. A substantial minority (15%) are Education officials or managers whilst small minorities are in full-time study, outside education altogether or seeking employment. More detail of the educators is provided below. Of the two very small categories, the full-timers in higher education include one person enrolled in an IED-sponsored doctoral programme at the University of Oxford and one person in a sponsored Masters programme at a US university. Those currently outside the education profession include one person working with an NGO in development work in Central Asia; one person acting as an aide to a Provincial Minister in Pakistan, and one person seeking employment.

Table 5 provides a breakdown of the numbers within the general categories of School-based and Non-School-based educators.

Nature of work	Number	Percentage
School-based educators.	35	40%
-Teachers	10	11%
-Head Teachers	10	11%
-Heads of Department	3	3%
-PDT	8	9%
-Teacher/PDT	4	6%
Non-School-based educators.	34	39%
-Teacher educators	29	33%
-University teachers	5	6%
Education officials or managers.	13	15%
FT in Higher Education.	2	2%
Outside education/Other.	3	3%

Table 5: Elaborated categories of work being undertaken by MEd graduates after their exit from the programme and at time of most recent data collection.

The data of Table 5 provide elaboration upon the two broad categories of educators, each of which accounts for some 40% of all programme graduates. It shows that some 30% of the School-based educators are classroom teachers whilst a further 30% are head teachers and just under 10% of them are heads of department. In addition, we have had to create two new categories to account for those programme graduates who are PDTs working in school but whose responsibilities are distinctively different from those of regular classroom teachers, head teachers or heads of department. These categories, as included in Table 5, are School-based PDT (used to refer to those eight respondents whose primary role is the professional development of their teacher colleagues in school) and Teacher/PDT (used to refer to those four who are working primarily as teachers but also have some role focusing on the professional development of their fellow teachers).

The other large group of educators comprises those working in other than school environments. They consist of a large group of Teacher educators (86% of all Non-School-based educators) and a small group of University teachers. The Teacher educators all seem to carry out similar work and are concerned with the professional education or development of teachers in their respective systems, but they operate under a variety of titles. In the government sector, in its Colleges, Provincial Institutes of Teacher Education, or Institutes for Professional Development, they are Teacher Trainers. Elsewhere, they might be labeled as Program Associates (e.g. AKES,P), or as Professional Development Centre faculty (e.g. PDC, North in Gilgit) or simply as PDTs.

Changes in frequency of particular employment categories from entry to time of most recent data collection:

Table 6 presents data on categories of work from time of programme entry alongside the most recently collected data.

Table 6: Differences in categories of work being undertaken by MEd Course Participants/ at entry and after exit from the programme.			
Nature of work	**Entry**	**'Recent'**	**Difference**
School-based educators.	60	35	-25
Non-School-based educators.	19	34	+15
Education officials or managers.	8	13	+5
FT in Higher Education.	0	2	+2
Outside education/Other.	0	3	+3

What the data of Table 6 show is a very clear pattern of apparent 'flight from school' and into all other categories of work. The number of School-based educators has declined from 60 to 35, a decrease of 42%. And this, which at entry was by far the largest category (by a factor of 300%) has now basically the same number as those of the Non-School-based educators, with each category now accounting for some 40% of all cases. The number in the Non-School-based educators category has increased from 19 to 34 or by close to 80%. Likewise, a small numerical (+5) but large percentage (63%) increase has occurred in the number of Education officials or managers.

Table 7 provides elaboration and further breakdown of the two categories of School-based and Non-School-based Educators.

Nature of work	Entry	'Recent'	Difference
School-based educators.	60	35	-25
- Teachers	50	10	-40
- Head Teachers	8	10	+2
- Heads of Departments	2	3	+1
- PDT	0	8	+8
- Teacher / PDT	0	4	+4
Non-School-based educators.	19	34	+15
- Teacher educators	13	29	+16
- University Teachers	6	5	-1
Education officials or managers.	8	13	+5
FT in Higher Education.	0	2	+2
Outside education/Other.	0	3	+3

Table 6: Differences in categories of work being undertaken by MEd Course Participants/ at entry and after exit from the programme.

Table 7 reveals something more of the pattern underlying the earlier-shown outcomes. It shows clearly that our label 'flight from school' was really a misnomer for what is now shown clearly (and dramatically perhaps) to be a 'flight from the classroom'. The number of purely classroom teachers has declined from 50 to 10 (a decrease of 80%) and this is only slightly compensated for by the new 'PDT in school' categories where 12 people are now to be found. The largest single increase has been in the number of non-school-based teacher educators (from 13 to 29, a percentage increase of 123%). However, to reiterate, the most striking features of Table 7 are the massive decrease in the number of classroom teachers and the growth or near-stability of all other categories.

Summarized changes in individual employment categories from entry to time of most recent data collection:

It should be noted that the data presented in Table 7 are the gross numbers in categories before and after the MEd programme. The numbers tell us, for example, how many teacher educators there were before and after the programme but they do not tell us about the individuals who entered the programme as teacher educators and what happened to them. We therefore examined each case individually for change or stability and the outcomes of this process are summarized in Table 8.

Table 8: Patterns of change for individual entrants to the MEd programme.		
Of the 60 School-based educators at entry:	**Of the 19 Non-School based educators at entry:**	**Of the 8 Education officials/ managers at entry:**
…53% (33) remain School-based educators;	…11% (2) are School-based educators;	…0% are School-based educators;
…34% (19) are Non-school based educators;	…58% (11) remain Non-school based educators;	…50% (4) are Non-School based educators;
…8% (5) are Education officials/ managers;	…21% (4) are Education officials/managers;	…50% (4) remain Education officials/managers;
…3% (2) are Outside education/Other;	…1 is Outside education/ Other;	…0 are Outside education/Other;
…1 is a full -time student in Higher Education.	…1 is a full-time student in Higher Education.	…0 are full-time students in Higher Education.

Despite the patterns of substantial change that we have already seen in tables Table 6 and 7, the data of Table 8 reveal another interesting, countervailing trend towards stability. That is, what these data suggest is that entrants to the programme tend to return to the roles in which they entered the programme. So, for example, we know from the data of Table 5 that the probability of any one programme graduate being a School-based educator is 40% whilst the probability of any programme graduate being a Non-school-based educator is similar at 39%. However, what the data of Table 8 tell us is that if we know that an entrant to the programme was a School-based educator at entry, then the probability of that person being in the same category at the most recent data collections is as high as 53%. Likewise, the probability of a Non-School based educator remaining as such at time of most recent data collection is 58%. A similar pattern is perhaps also visible for the Education officials and managers although the frequencies are so low as to prevent firm generalizations.

Regional effects

We examined the data for any possible national and regional difference but in this case the effects that we have already seen seem themselves to be too overwhelming to allow clear patterns in the much smaller regional and national data sets. That is, the trend for the number of classroom teachers to decline is the dominant feature of the data in every region. In Table 9 we have therefore used this one measure as our proxy for a brief examination of apparent or possible regional and national effects.

Table 9: Percentages of classroom teachers at entry and at time of most recent data collection across regions and countries (where N>5).			
		Percentage of Classroom Teachers:	
'Regions'	N	Entry	'Recent'
Karachi/Hyderabad	25	80%	20%
Chitral/N. Areas	19	26%	0%
Peshawar/Quetta	14	43%	14%
East Africa	16	75%	19%
Central Asia	12	50%	0%
Bangladesh	1	-	-

The data of Table 9 suggest that the trend of decline in numbers of classroom teachers is similar across all regions or areas represented but that issues of differences at time of entry might be worthy of further investigation.

System effects

We have carried out a comparable analysis of system effects as was done for regional effects. This is shown in Table 10.

Table 9: Percentages of classroom teachers at entry and at time of most recent data collection across systems (where N>5).			
		Percentage of Classroom Teachers:	
Systems	N	Entry	'Recent'
AKES	38	59%	8%
Government	37	57%	14%
Private sector	7	71%	29%
ITREB	3	-	-
NGO/CBO	2	-	-

These data suggest that the trend of decline in numbers of classroom teachers is similar across at least the two large employers represented here-AKES and Government. The private sector data suggest perhaps a slightly higher retention of teachers in classrooms in this sector.

Time since Master of Education completion

Given the evidence provided above for substantial change in the nature of MEd participants' employment, there remain questions of whether we are observing perhaps sudden and radical change immediately after the MEd programme or of whether we are observing gradual but continuing trends. Fortunately, in the case of the classes of 1999 and 2000, we have post MEd data collected on two separate occasions (see Table 1). With both classes, the first post-MEd data collection was approximately one year after programme completion. In the case of the class of 1999, the second occasion was on average just under one year after the first; in the case of the class of 2000, the second occasion was on average 15/16 months after the first. Table 11 shows the outcomes of this analysis.

Table 6: Differences in categories of work being undertaken by MEd Course Participants/ at entry and after exit from the programme.			
Nature of work	**Entry**	**After approx one year**	**Most Recent**
School-based educators.	60	35	-25
- Teachers	50	10	-40
- Head Teachers	8	10	+2
- Heads of Departments	2	3	+1
- PDT	0	8	+8
- Teacher / PDT	0	4	+4
Non-School-based educators.	19	34	+15
- Teacher educators	13	29	+16
- University Teachers	6	5	-1
Education officials or managers.	8	13	+5
FT in Higher Education.	0	2	+2
Outside education/Other.	0	3	+3

What is clearly visible in Table 11 is that the transition from School-based educators to Non-school based educators; the flight from the school and the classroom is not a one-time transition. Rather it is a phenomenon that continues to occur with the passage of time, as more and more people tend to shift their positions towards teacher education with the passage of time. Indeed, there is a suggestion in Table 11 that 'PDT in schools' may be just a temporary phenomenon and that over time even this small increase in the number of School-based educators might itself disappear.

Discussion of results

In summary the results, from time of programme entry to time of latest data collection, were:

- the percentage of educators (both school- and non-school-based) declined from 91% to 79%;
- the percentage of school-based educators declined from 69% to 40%;
- the percentage of non-school-based educators increased from 22% to 39%;
- the percentage of education official or managers increased from 9% to 15%;
- there is a greater diversity in the later data (the average percentage in any one category declines from 33% to 20%);
- the number of purely classroom teachers declined from 50 to 10 although this was partly compensated by 12 programme graduates working in schools in PDT or part-PDT roles;
- the number of teacher educators increased from 13 to 29 or by 123%.
- the above effects seemed to apply regardless of the regions or employment systems from where the graduates come;
- the nature of employment at entry seemed to help determine the likely future employment of graduates; and,
- changes which occurred in graduates' employment after their MEd programmes seemed to be gradual and continuing rather than one-off.

This discussion focuses on two major issues arising from these results-that of the apparent 'flight from the classroom' and that of what these data might tell us about the nature of impact studies.

(a) Flight from the classroom?

Many colleagues with whom we have shared the preliminary results of this study have reacted with some shock, horror and concern at hearing of the decline in the numbers of classroom teachers from 50 to 10. At first, this too was our reaction and even our somewhat emotive label 'flight from the classroom' captures something of these feelings. However, some more reflection tempers this reaction and we now want to ask whether this outcome is something that should worry us or whether it is perhaps a reflection of something that should not surprise us greatly.

Contemplate first of all, IED's own descriptions of the MEd programme and its graduates:

> …the programme graduates are called Professional Development Teachers (PDTs) and return as teacher educators to their home schools and/or educational organizations, as well as to institutions of higher education (such as the IED). It is expected that the PDTs will form the core staff of the Professional Development Centres currently being established or planned. (Information Pack: Professional Development Teachers, 2002, p.1).

Then recall that the aims of the programmes for the Classes of 1999 and 2000 were:

> …to prepare a cadre of experienced mid-career teacher educators, educational leaders, researchers and agents of change' who would be committed to bringing change in their respective systems. (Professional Development Teachers' Information pack, 2001, p.1).

The programme aims for the Class of 2002 were:

> [a] programme graduate would be an exemplary classroom teacher; an effective teacher educator and a competent beginning researcher…(Handbook, Class of 2002, p. 9).

It would appear that the outcomes of the programmes match remarkably well the statements of aims for these programmes.

In other words, we cannot have it both ways. If we wish our programme to have its effects in teacher education in PDCs and in Universities then we should not be surprised when that is the outcome. If, on the other hand, we want our programme to have its effects in schools and classrooms, then we should define our programme aims accordingly and plan for their achievement rather than for the achievement of different aims. And if we do, as a matter of emphasis, wish to increase the number of graduates who are classroom-based, then we should take note of the data presented here and at least make a point of admitting to the programme those who are classroom practitioners at the time of entry.

(b) On the nature of impact studies.

We are frequently asked at AKU-IED about some kind of hypothetical 'before-and-after impact study' which somehow would assess the impact of our MEd programme by comparing school students' performance who have been taught by our CPs both before and after their MEd programme. We have argued elsewhere that questions of impact of the MEd programme are complex ones and that we will probably never be able to design, develop or create the one impact study which will offer conclusive evidence of the kind being sought. One way of interpreting the evidence that we offer in this paper is that the MEd programme succeeds in driving people out of the classroom. Another way of interpreting the same evidence is that these data suggest that the MEd programme is pretty good at achieving it stated aims and having people work in a variety of settings such as schools, universities, PDCs and in a variety of roles-teachers, teacher educators, and researchers. However, our preferred approach is to say neither of these things but rather to assert and to keep asserting that life is more complex, that impact is not the one-dimensional 'collision between two objects' so beloved of the physicists but rather, in our setting it is a question of complexity, of convolution, of multidimensionality. In his essay on 'The Impact of Impact', Fielding (2003) puts a similar argument:

> [The language of impact] valorises what is short-term, readily visible and easily measurable…it has difficulty comprehending and valuing what is complex and problematic, what is uneven and unpredictable, what requires patience and tenacity. …it finds difficulty in distinguishing between levels of change, between what is fairly superficial and what is...'transformational' …it will turn out to be a blunt instrument which will produce commensurately crude finding… (p. 289)

He suggests that we need to do:

> …the intellectual hard work [to] enable us to move on from the seventeenth- and eighteenth-century mechanical world view, through the nineteenth- and twentieth-century organic world view, to a view fit for the twenty- first century, a world view that understand that we are not machines, not just organisms, but persons. (p. 294)

What is certainly clear from the data presented here is that simple before and after studies of impact are not possible when the 'before' and 'after' states are as different as the ones presented here. Second, it is noteworthy that whilst this paper has addressed some

apparently very simple questions about participants' roles before and after the MEd programme, interpretation of the answers is more complex than is at first sight apparent. Our role is more like that of the forensic scientist than that of the laboratory physicist. We have pieces of evidence-some more reliable than others; we have hunches, theories and metaphors; we have clues, hints, traces and suggestions. Our search is for a mostly-hidden web of complexity with only a few of the nodes and links visible. Our task is to attempt to fill in the many missing pieces.

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CHANGING THE INDIVIDUAL AND WORLD AROUND HER: A CASE STUDY OF FEMALE TEACHER FROM RURAL SINDH

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Abstract

As part of a project funded by the United States Agency for International Development (USAID), AKU-IED implemented a research study that aimed to understand the Impact of AKU-IED Capacity Building Initiatives for NGOs/CBOs in Education in Sindh. This paper will present some of our findings on the nature of impact of the program on individual course participant.

The paper will present the case study of Mariam[1], a female teacher working in a school managed by an NGO in rural Sindh. She participated in a Certificate in Education: Primary Education Program organized for NGOs. After completing the certificate course Mariam was also selected for the Advanced Diploma in Education Course. Mariam begun her professional career from a donor-supported community-managed girls' primary school as its teacher and, within a very short time, she was appointed as the Principal of the same school. Thus, she gradually moved ahead and attained a pivotal position in her organization.

In order to study impact of the teacher development program on an individual, Mariam was interviewed along with her colleagues and NGO representatives several times over the period of two years with intervals of six months.

The professional development course had a multifaceted impact on Mariam's personality and her professional practice. She brought changes in her behavior and attitude with her colleagues, students and community; therefore she became friendlier and tried to interact with and include others in school improvement plans. Mariam's professional practice,

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1 This case study is based upon the information collected through Mariam, her colleagues, supervisors, and her classroom observations over the period of time. Bits of information regarding advance diploma program have been received from Mariam in semi-informal settings or through her reflection papers. Names of the respondents have been changed and names of NGO and location have not been revealed to meet with the ethical requirements.

such as teaching, planning and decision-making, and managing and monitoring the school, also seem to be significantly enhanced and she seems to have emerged as a good teacher and manager. Over a period of time a change in her status has been observed as she has developed herself as a teacher educator along with teaching responsibilities.

We will also try to explore factors, particularly program-related factors, which contributed towards the change process and supported the CP in creating impact from her initiatives.

Introduction

This case study of a female teacher, Mariam, has been developed under USAID Project-4 "Documentation & dissemination of 'Best Practices' & 'Lessons Learned' in the Community Managed and Financed Education Initiatives for Programme and Policy Advocacy". This project comprises of five different studies. Study-5 aimed at documenting the impact of AKU-IED's initiatives on individual course participants and NGOs' practices.

Interviews and classroom observations were conducted as part of the data collection. The interviews were conducted at the beginning of the program and immediately after completion of the program. Further, two more interviews with intervals of six months were also conducted of Mariam, her colleague teachers, and the NGO head. In addition, classroom observations were made on each follow-up visit, and assignments and other documents were also reviewed. We also got the chance to chat with Mariam informally and a few of the information notes from these informal sittings are also used to develop the case study.

Mariam's profile

Mariam is a young female Pakistani teacher who has been working in an NGO school in rural Sindh for the last five years. She joined this school recently as a teacher and now also performs the role of teacher educator. Earlier she worked as a teacher and then as the principal in a community-managed girls' primary school supervised by the same NGO.

Mariam belongs to a middle class family. Her father retired a few years ago from a low-profile job in a government hospital. Her mother is a housewife. Mariam has five sisters and a younger brother.

Mariam's highest academic qualification is a Master's degree in Urdu. She was educated in government institutions in her native city and was considered an average student during her academic life. Within her family, education was always given the highest importance-her father received education up to the primary level and, although her mother has not received any formal education, she was taught the Quran and therefore was able to read and write Urdu fairly well. Mariam's three sisters were educated up to a Master's level and the other two are currently studying in higher secondary classes while her only brother is studying in grade VI. Her parents always supported their girls morally in their educational pursuits and even helped them in doing homework during their early schooling. According to Mariam, although her parents were not able to support the children to a great extent academically, they contributed a lot to their education. She narrated that:

> As my mother was taught Quran, she could read and write Urdu easily. She used to help us in study till grade five. She was really concerned about our education. Similarly my father would help me in solving math sums. They were not very educated but always gave value to our education. (Teacher's interview Before the course)

Mariam began her career as a teacher in 1998 when the NGO called her for an interview and selected her as a teacher. Unfortunately, some other teacher was appointed in her place without any intimation to Mariam. When Mariam found out, she was annoyed and decided to fight for her right and, after a few days' deliberations, she was finally appointed as the teacher. Within a short span of time she proved herself to be a hardworking and active teacher and was quickly promoted to the position of Principal by the same management committee members who had initially opposed her appointment as a teacher.

It is usually observed that the teaching profession is given little importance in the Pakistani context but, for Mariam, joining this profession was not merely incidental but an informed decision. In a discussion about her joining the teaching profession, Mariam revealed her keenness to become a teacher since her early student life. Her enthusiasm had been so deep that, as a child, she always acted as a teacher whenever played with her friends. She recollects a memory of her childhood in which she reflects her enthusiasm for the teaching profession in these words:

> When I was in grade three, my mother and I went to visit my uncle in another province. One day, early in the morning, we went out for a walk. Few steps ahead I saw a ground outside the school where the children were assembled, singing a poem. I stood a while, then asked from my

uncle 'we don't sing this poem in our school…!' My uncle said "this is not a poem, this is 'Dua' (prayer) here we pray to the God before singing the national anthem". I memorized that prayer and thought when I become a teacher I would recite this prayer in my school. Ever since my childhood I have been very keen to become a teacher. (Teacher's interview after a year of the course)

Moreover, Mariam thinks that teaching and learning is a very interesting process because through this, one can increase one's knowledge base. Perhaps due to her anticipated decision, she was passionate about her profession and school. Her enthusiasm and passion always dominated her mind and she used to think about school development even in her spare time at home. However, Mariam's earlier notions regarding teaching and learning mainly originated through her own experience of learning in her student age, when she was taught through conventional methods in which the learner is not given much value and is asked to read the textbook and learn from whatever is written in it.

Before coming to AKU-IED, Mariam had attended various training sessions on different aspects of teaching conducted by the NGO. She acknowledges her learning from these trainings and, according to her, these trainings introduced her to teachers' development. Although she considered herself to be a good teacher because of her pervious training she still aspired towards this training because she felt that it would improve and update her prior knowledge in educational issues such as curriculum, syllabus and educational issues. Another motivational factor was her attachment with the school and her wanting to bring about many changes and developments.

> … I love my school and I always use to think about its development. I want to improve the quality of education, as our country needs good citizens. This is only possible through good teachers, a good teacher being one who possesses the knowledge and skills. This training might help me in gaining new knowledge and skills (Teacher's interview before the course).

Mariam's was selected for the certificate in education course after an interview by a team from AKU-IED. She was interviewed in her hometown and reported that before the interview she was apprehensive of what might be asked of her, even though she had undergone an interview for her job before. She was worried about the impressions she would make on the interviewing team who arrived from Karachi.

When she had first found out about the course and wanted to take the interview, she had informed her parents in advance that if she would be selected for this course she would have to go to Karachi. Initially, when she was selected for the course, her mother opposed it and was reluctant to give permission and saying "it was not possible to go Karachi for two months and live in a hostel with strange people". But her father supported her and gave her permission to attend the course.

> My father supported me a lot, he said to my mother that 'we have spent our time and now this is their age. Let them do what they want, if they go along with the modern age, it will be beneficial for them.' (Teacher's interview before the course)

It was the first time that Mariam had attended a course of this length and that too outside her hometown and away from her family. Coming to Karachi and living in a hostel was indeed a tough experience for Mariam. AKU-IED gave Mariam her first exposure to an international environment. According to her, she was extremely afraid of being at AKU-IED and thousands of questions arose in her mind as how she would survive in a strange environment.

She took time to settle down and socialized with her colleagues and, slowly and gradually, built up her confidence and overcame her fear. She started participating in class activities. She mainly credited facilitators' efforts that made the environment friendly for every course participant. The facilitators did not impose their knowledge but asked students to share and reflect on their practice in their own classroom. Her prior knowledge also helped her to gain momentum in the class. For example, she actively participated in the discussion regarding the "role of community in school", as she belonged to a community school and found it easy to take part in this discussion.

With her participation in the course she acknowledged the learning from the course. She says:

> I learned more from this course than any teacher trainings I received earlier and I must recommend this course for all of my colleague teachers, it is especially useful for who don't know about the responsibilities of a teacher and the objectives of teaching and teach in a conventional way, merely spending the time in the class and coming back home.
>
> I didn't know that we would be taught about lesson planning and multi

grade teaching, I just thought that there would be things about teaching and curriculum and the training would be limited up to teaching of textbooks only. However the amazing thing of this course I found was that we learnt, understood and then practiced which helped us in retaining every thing that we learnt. I felt as though I was learning mathematics, science and social studies first time. (Teacher's interview after the course)

After completion of the course, she returned to her school as a knowledgeable and confident teacher who was filled enthusiasm and curiosity. Immediately after rejoining her school Mariam was called by AKU-IED for an interview for the Advanced Diploma in Education (ADE) programme. At that time she was in two minds: on the one hand she had developed an interest in attending the ADE programme; but, on the other hand, she was more interested in first applying the earlier course's learning in her school. According to her:

I wanted to attend the diploma course only to improve the quality of education of my school so that my school can compete with other school of the vicinity. But if I had attended another course immediately after, I would not have been able to apply my earlier course learning. (Teacher after her selection in advance diploma)

Here enthusiasm triggered her into implementing the course learning and she started working on school development plans with the help of her colleagues and, over a period of almost one-and-a-half years, she got to work on the different plans. In October 2002, she was again selected for the same ADE programme and she again got the chance to come to AKU-IED. According to her, she had seen a great change in her teaching after attending the original course and therefore had dreamed of being selected for the ADE programme so that she would learn more about teaching. In her words:

It became my wish to attend the advanced diploma because when I implemented my earlier course learning in school I achieved better results. This pushed me to learn more … if I hadn't have selected for this course, I'd have thought that I have missed out on a great opportunity … I was so happy when I was selected … (Teacher's interview after her selection in advance diploma).

Changes in Mariam's life after studying at AKU-IED

In this section of this paper we would like to discuss the multifaceted impact of AKU-IED professional development courses on Mariam's personality and her professional practice. After attending the course there was a major change in Mariam's attitude towards her colleagues and management committee. She developed patience and became more polite and friendly with them. She adopted a strategy of teamwork through which she involved her colleagues in planning for school development. For this she created an environment where all teachers could share and discuss their problems related to teaching and learning. Mariam treated her teachers on an equal basis and preferred to treat them as friends rather than taking on role of authority or a Principal. She says:

> Now I have learned that if we want to work together compatibly, we have to develop equality, patience and endurance. If we behave appropriately with our colleagues, students and management, we will be able to gain their trust. When there is mutual trust, things can be managed smoothly (Teacher's interview after six months of the course).

Mariam has also considerably changed her attitude towards the students. She gives more importance to child centered learning in her teaching and tries to take into account students' problems and psychology. Her colleagues also reported this change in Mariam's attitude and also adopted the child centered point of view.

Changes in Mariam's attitude and behavior are mainly attributed to her learning at AKU-IED where she got several opportunities to re-conceptualize and rethink every aspect of her life. This helped her to reflect upon her actions before actually carrying them out. For instance, on one occasion, when Mariam became very emotional during the class, she was advised by the facilitators to reflect upon her attitude. This made her realize that she should control her emotions.

Mariam had also developed the habit of reflection and it was found that she mediated her enactments by her reflections. The changes in personal domain (i.e. domain of beliefs, knowledge and attitude) of Mariam led to her changes in the domain of practice. When she reflected on the areas of the school that needed improvement, she involved her colleagues in every move. After considering and discussing various areas of improvement with them she realized that she needed to focus upon lesson planning, which she considered pivotal to the rest of the other academic factors.

After the training, when I rejoined the school, I found that there are many areas that needed improvement. After reflecting and sharing ideas with my colleague teachers, we decided that lesson planning would help in improving other areas of school. Although we did plan our lessons before the training, the objectives of the lessons were not highlighted. Even the method of lesson planning was restricted to topic, subject and strategies. This planning did not include assessment of the children's learning and their difficulties. During the course at IED when we practiced the lesson planning we focused upon the learners and their learning, objectives and methods of teaching (Teacher's interview after the course).

In her interview, Mariam reported that, initially, when she wanted to start work on bringing changes in implementing the lesson planning her teachers could not understand as they had not considered the importance of lesson objectives and students' assessment so deeply before. However, they showed their eagerness to work together with her. As Mariam had learned the application of effective lesson planning during the course, she was quite confident that she would be able to explain the same to her colleagues. Thus she planned to conduct 15 sessions, of one hour each, on lesson planning on a daily basis after the school time.

> … likewise I started to take one session of an hour daily after the school time. Three of the five teachers took more time to learn because they were unable to implement their prepared lesson plan in their teaching accordingly. While the other two that had managed to implement their required changes continued to guide the other colleagues and assisted them in implementing the change (Teacher after six months of the course).

After the initial implementation of these practices, teachers still had problems in achieving their lessons' objectives due to the shortage of time. They rectified the problem in their discussions and mutually decided to increase the length of time for each period from 35 minutes to 60 minutes. In order to adjust the subjects according to the new timetable, they decided to teach only four major subjects twice a week and other minor subjects were to be covered under these major subjects. For instance, language and social studies were to be incorporated into a broader topic of general knowledge.

Mariam and her colleagues reported this experiment as a success in many ways for school development. For example, teachers started to reflect on their teaching practice and they were able to identify their teaching weaknesses and the lesson objectives and students

assessment were more focused upon. Eventually a collegial and friendly environment in the school became apparent where everyone started sharing and learning. Moreover, teachers also reported better students outcomes, that is, the skills of reading and writing improved, they participated more in class activities, responded to questions quickly and even asked the teacher questions.

In response to interviews and during informal discussions Mariam referred to several different elements of her school environment that supported her in the process of professional development. These included: support from schoolteachers, an active management committee and the availability of resources. In addition some other reasons also accounted for Mariam's practice such as her being in a position of authority combined with her self-initiating nature. All these were invaluable in helping her implementing the new learning reforms.

Mariam in her class

After attending the professional development course, Mariam had become an innovative and reflective teacher. It was observed during interviews of Mariam, her colleagues and NGO supervisors that she had shifted from a conventional teaching approach that included the use of chalkboard, individual seatwork, and explanation to whole class. It has already been mentioned that Mariam used to share course learning with her colleagues before introducing any aspect of school or classroom development. Unlike the lesson planning, group and pair work were introduced for the first time in her school and she included these methods in her lessons plans. She found them to be very beneficial in terms of enhancing student learning. She reflects that:

> If a child is weak in writing, I seat him/ her in the group and encourage him/ her to write … 'your fellow students will guide you'. In this way the child improves his/her writing and develops a sense of competition and works hard. As a group dynamics, all three kinds of learners i.e. slow, average and intelligent develop themselves altogether. Likewise in pair work I mix up the slow and fast learners in pairs. By this, students feel very happy; they listen each other's lesson and correct each other. Thus both children benefit from their teamwork (Teacher's interview after 6 months of the course)

Similarly she also adopted other teaching strategies such as improving language skills of children by combining compulsory and minor subjects of language, story reading,

role play, presentations, use of low/no cost material, activity based teaching and introduction of the Dalton method (Under this method students are kept free to work in the class on different tasks and the teacher's role is to guide and supervise them). A description of one of Mariam's classroom observations shows that:

> The teacher divided the whole class into six groups with four students in each group. She asked each group to go out of the class and bring some object. After a while each group came back with different objects in their hands like storybook, marker, toothpaste box, biscuit box and chalk. Teacher distributes plain paper among them and instructs each group to draw the object and write some sentences about benefits of the objects. The teacher keeps moving around in the class and guiding them [teacher is very polite and encouraging to all the groups]. She asks the groups one by one to come forward and present their findings… (Teacher's classroom observation on Feb 7, 2002).

The introduction of these changes was not limited only to Mariam's class but was also observed on a school level. Mariam's colleagues also found these methods very helpful in their teaching. During a group interview they shared that:

> We appreciate the introduction of new teaching methods in our school because we feel that these methods are helpful for our teaching. The Impact of these methods is also seen on students' confidence; they work in an environment that is conducive to learning, where child-to-child learning also takes place (Teacher's interview after a year of the course).

In order to provide continuous support to teachers for their professional growth, Mariam found peer coaching to be a successful strategy along with such other strategies. For this she started with one teacher and gradually extended the practice to other teachers. According to Mariam, this strategy is more successful in the context where teachers do not get opportunities for their professional development. After her successful experiment Mariam shared that:

> To develop the professional capacity of the teachers, I focused upon the peer coaching strategy, which was taught in teacher education course and diploma course (at AKU-IED). By this strategy I found a great improvement in my school. I started with one of my teachers Shahida and invited her to observe the class. Afterwards I observed her class teaching, and finally

we shared with each other and identified the gaps in a way that she would not feel herself devalued. Shahida taught a poem "Mehnat" (hardwork) in class IV. I observed that she defined the different professions in the poem by using models. In the end she straightaway read the poem. When I gave her feedback, I suggested that if I would teach this poem, I would have done it by singing. Teacher accepted my suggestion, however said that she did not learn this poem by singing as a student herself, so it is hard for her to sing the poem now. I said "let's work on it". I also involved another teacher Rahila for the other day's planning. On the next day I went to the class with Shahida, and found that the students couldn't learn the same poem by heart. Then with the teacher's permission I taught the same poem by singing in a rhythmic way. Amazingly students got involved and they remembered it. Thus the teachers realized that it's not necessary that we must teach to our student the way we have been taught (through conventional methods). After Shahida I did peer coaching with Shaher Bano and then Shaher Bano did the same with Roshan, and Shahida peer coached with Rahila, and now they all are peer coaching with the new comer. Thus there is a continuity in the process (Teacher, during the Diploma course).

It appears that Mariam, along with her colleagues, not only continues her teaching practices in the class but always tries to bring new ideas and innovations in her school. Her NGO supervisors confirmed this when they said:

Whenever we go to visit Mariam's school, she used to say that she wants to introduce new things, new innovations in her schools... she always seems eager for the improvement (NGO supervisor interview after 6 months of the course).

The enhancement in Mariam's content knowledge and pedagogical skills seems to be the result of her learning at AKU-IED, which has contributed a lot to Mariam's professional development. However, her own commitment and enthusiasm for the teaching profession also enables her to explore and seek out the new methods of teaching such as the introduction of Dalton's method in her school.

Mariam's management in the school

As mentioned earlier, Mariam worked as Principal in her school along with carrying out

teaching responsibilities. After returning from AKU-IED it seems that, along with her teaching skills, her management skills have also improved. There seems to be a change in record-keeping, monitoring, communication, and coordination with people. A major change in her managerial skills, as observed by Mariam's colleagues, NGO supervisors and members of management committee, was her decision-making power. She took many decisions, which later proved to be beneficial for the school development. Some of these were the introduction new teaching methods, proposing a new school building, introducing new formats of record keeping, and sparing time for sharing and debriefing after school time.

School records related to teachers' and students' attendance, finance and monitoring supervision are now prepared in time and are kept ready for any reference. For Mariam, maintaining the records was beneficial and the importance of organized records was evident when visitors or NGO representatives visited the school to get an update. The NGO supervisors also attest to Mariam's organizational changes in these words:

> Mariam's school is one of the schools where you always find complete
> and well maintained records (NGO supervisor interview after 6 months
> of the course).

Mariam's strong monitoring skills helped her to identify weak areas in her school and target those for improvement. For example, if she found any weakness at the class level, she gave feedback to teachers whereas she involved teachers and members of management committee on necessary school organizational policy. Although she had not done this monitoring in a formal way (by developing some formats) she tried to keep a vigilant eye on school matters.

Mariam performed her managerial role very carefully. Her communication and interpersonal skills in dealing with different people in different situations have gradually improved. She treats her teachers as friends while her behavior as an administrator during official meetings is professional. She likes her teachers to maintain good relationships with management committee members so that they feel comfortable with each other; however, she safeguards her teachers from direct inquiries from the school management committee regarding their weaknesses related to teaching. She wants them (management committee members) to consult her in this connection because she likes to expose her role as a strong manager. She shares that:

> I never share petty issues regarding my teachers and school with school

management committee and during the school visits, if they (management committee) identify any weakness, they are supposed to disclose it to me because I am responsible for everything happens in the school. If they started to interact with the teachers directly, some misunderstandings might emerge… moreover with the direct contact of school management with the teacher, role of a head would be obscured (Teacher, after attending the course).

One of the major qualities considered important for a manager is an effective problem-solving approach. Mariam has also developed herself in this area. She identifies the problem and tries to explore its reasons and possible solution through consultation with her colleagues. As she said:

Before the training I used to address the problem instead of avoiding it off. But as I didn't know the reason for the problem … most of the times I failed to resolve it and in case I succeeded in resolving that particular problem the other unseen problems related to that one emerged later and thus it seemed like a unending chain of difficulties… but here [in the AKU-IED training] we've learned that first thing we have to find out the root cause of any problem. It is then easy to work towards resolving it. I adopt this approach and found it much more beneficial (Teacher, after attending the course).

As discussed earlier, Mariam has recently shifted from a community school to NGO School. However, she has not disconnected herself from her earlier school. She still cherishes the community school as her 'own school' and always shows great humility towards it. She visits the school and tries to help teachers in any matters related to school management. She remains concerned about the professional development of the teachers of this school and has also conducted a one-week teachers' development workshop. Mariam reports that she has developed her teachers to such an extent that after her departure from the school, they are now capable of managing the school without her. Initially, they faced some problems but her continuous support enabled them to overcome those difficulties.

As a teacher educator

According to Mariam, her informal role as a teacher educator started when she returned from the first certificate course and began peer coaching in her school. After some time,

she was called by the NGO to participate in the teachers' development activities arranged by her NGO colleagues who were diploma graduates. This was her informal role and she just took on the responsibilities related to logistic arrangements; however, by attending these workshops she developed an interest in being a teacher educator in the future. Thus, within a short period of time her participation in these sessions increased from looking after logistics to facilitating a few sessions.

Mariam's formal role as a teacher educator began when she attended the ADE programme at AKU-IED. Since then, she has started to participate in the NGO's teacher development programs with an extended role. According to her, she gradually enhanced her skills in teacher education, which she learned from the AKU-IED facilitators and her NGO colleagues (diploma graduates). Thus, Mariam has developed her skills to the extent that she is now capable of designing and conducting workshops independentlysuch as a one-week workshop she conducted on pre-primary concepts of teaching for the teachers of community school.

Mariam's NGO also recognizes her strong role in teachers' professional development and has invited her to join the NGO's Learning Resource Center as a teacher educator and also to perform as a teacher in the NGO's school. The major reason for this change in her status is that the NGO views her as a bridge between its school and the learning resource center. Mariam reflects upon her current status in following words:

> Certificate course's learning was confined up to individual or class, school level development, in which we learned how to introduce new methods in class teaching or how to involve community in school. But in the advanced diploma whatever we learn, we have to utilize it for the development of our teachers. Although we received content knowledge in certificate course and cleared our teaching concepts the advanced diploma we have moved a step ahead, and developed reflective thinking for teaching and now unlike the certificate course when we used to think 'as a teacher', we now think as a 'TEACHER EDUCATOR' (Teacher's final comments).

Impact Analysis:
Experiences of a Ugandan Professional Development Trainer

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Abstract

Creating impact or making a difference in my school system is an issue that boggles my mind everyday I wake up to go to (and return from) work. This is mostly so when I am involved in facilitating a workshop or programme. Such questions as: will the teacher participants learn something (new) they can implement in their classroom(s), or how will I know that they have learnt it and later implement it in their classroom, always ring in my mind. An attempt has been made to document the likely impact on teachers I work with. Some of the highlights are presented in this paper.

The paper briefly traces the roles and responsibilities I have held and performed as a Professional Development Trainer (PDT) of Aga Khan Education Service (AKES), Uganda, upon my return from Aga Khan University Institute for Educational Development (AKU-IED) after completing the MEd programme in the year 2000. During the programme, our cohort was trained and qualified as exemplary teachers, teacher educators and teacher researchers. Suffice it to say that I have not had an opportunity to perform all the three predestined roles, but the teacher education role stands out prominently.

The paper, therefore, reveals the evolution of my responsibilities and the corresponding tasks. Moreover, a greater part of the paper dwells more on revealing the impact that my professional responsibilities/activities had on the teachers that I have worked with in different interactions/activities. Notable ones include understanding and re-examination of the teachers' roles and attitudinal changes towards learners. Evidence has been captured in teachers' reflective journals and evaluations following professional dialogues/discussions and workshop courses. Teachers' comments will be cited verbatim to illustrate the likely impact as noted by the teachers concerned.

Finally, the paper will highlight some of the noted challenges in realizing and documenting impact, for example, the changing nature of teachers' perceptions, time to follow-up, document and corroborate teachers' sayings and perceived changes in their teaching

practices, and the over-emphasis on exams that often detracts from the teachers' readiness to use the teaching strategies shared during programmes/courses and workshops.

Background

This paper traces the roles and responsibilities I have held and performed as the PDT of AKES, Uganda, upon my return from AKU-IED after completing the M.Ed. programme in the year 2000. More importantly, the paper will highlight the impact that has been created as a result of the roles and responsibilities held. During the programme, my cohort and I were trained and qualified as exemplary teachers, teacher educators and teacher researchers. Suffice it to say that I have not had an opportunity to perform all the three predestined roles effectively, but the teacher education role stands out prominently.

When I returned in the third quarter of 2000, I resumed my former role (prior to joining the M.Ed. programme) as deputy headmaster of the Aga Khan Primary School, Kampala. My responsibilities were more of classroom teaching and less of school administration because, already, there was a headmaster and two deans/deputies. At the end of the year the headmaster resigned. The two deans and I worked as a team to steer the school until a new head was recruited and took office in April 2001. In March 2001 I was appointed to the post of Professional Development Trainer. My major responsibility in this portfolio was to structure professional development of staff in the schools' academic programmes.

In addition to AKES, Uganda (AKESU), responsibilities, I acted as a liaison officer for the Professional Development Centre, East Africa (PDC EA) and International Academic Partnership (IAP) in Uganda, and of recent, I am engaged in East African Strategies in Education (EASE) in Kenya, Tanzania and Uganda, eg, the inspection programme. It is important to note that in my multiple roles and responsibilities I do not only plan but also execute the plans. Determining my effectiveness (impact) is my primordial preoccupation.

From the outset I have to state that, though the activities I am engaged in are vast, there is evidence that impact has been created. The basis for my claim is the feedback I receive from those I report to and work with. Moreover, for the purposes of this paper, I will limit my report to the impact arising out of staff professional development activities with teachers of AKESU schools. Impact emanating from my and colleagues' roles as facilitators of PDC EA programmes has been highlighted elsewhere, e.g., Visiting

Teachers/Certificate in Education Programme module evaluation reports and the recent evaluation of the PDC EA Lead-in Project. To further narrow the scope of the paper, I will report on one important aspect that was introduced to promote teacher development -- reflective practice through writing of reflective journals following workshops, especially for teachers of the Aga Khan Primary School, Kampala.

Literature on reflective practice

Reflective practice has gained currency as bedrock for teachers' learning and improvement of their teaching practice. Dewey (1938, p. 38) argued that to reflect is to look back over what has been done so as to extract the net meanings, which are the capital stock for intelligent dealing with further experiences. It is the heart of intelligent organization and of the disciplined mind. He (1933) pointed out that reflection goes through different steps. The first step starts with 'perplexity, confusion, doubt' due to the nature of the situation in which one finds himself/herself. The second step involves 'conjectural anticipation and tentative interpretation' of given elements or meanings of the situation, and their possible consequences. The third step involves deciding on a 'plan of action' or 'doing something' about a desired result (cited in van Manen, 1995, p. 34).

Mcniff (1993, p. 59) argues that teaching and learning are two sides of the same coin; they are two perspectives of the same process. The process of practice becomes the object of inquiry; practice becomes inquiry. The practice of teaching others becomes the process of learning about oneself. Moreover, Knowles, Cole and Squire (1999, p.376) distinguish between reflective inquiry and reflexive inquiry processes of researching teaching. Reflective inquiry is an ongoing process of critically examining and refining practice, taking into careful consideration the personal, pedagogical, curricular, intellectual, societal, and ethical contexts associated with professional work. Reflexive inquiry, on the other hand, is reflective inquiry situated within the context of personal histories in order to make connections between personal lives and professional careers, and to understand personal (including early) influences on professional practice. Both these strands of inquiry informed my introduction and promotion of reflection.

Evidence from the teachers' reflections indicates that teachers experience the process mentioned above. Introduction of something different from the already known is bound to cause doubt and confusion as already observed by Dewey (1933). It has to be understood that staff professional development targets teachers who have had their initial teacher training. These teachers possess beliefs, values and understandings that we endeavour to change and improve. Such beliefs are so entrenched that to understand whether one

is having an effect/impact one has to think of a mechanism that can enable him/her to know whether the hope for change is occurring. The mechanism introduced was teacher reflection through writing of reflective journals.

Introduction of reflective journal writing

Following staff professional development activities, the teachers were asked to indicate their personal response(s) to the professional development activities. It is important to note that when the teachers were asked to write their personal responses to the programme in form of observations, reactions or suggestions, they raised many questions, especially wanting clarification on what I wanted them to write. In short, I asked them to write whatever they wanted to write in response to what they had experienced during the workshop. I emphasized that there was no format to follow while writing their reflections neither was there any specific information I wanted them to enter in their journals. All this was done in the interest of wanting to receive authentic feedback from the teachers since I hoped they would reflect on and enter whatever struck their mind during the workshops/reflective talks.

To date, involving teachers in reflective practice (journal writing) serves two purposes:
a) Encourage teachers to think deeply about what has been exposed to them, relate it to what they already know and practice, and think of how they can incorporate it in their belief system and teaching practice;
b) Enable the facilitators to obtain feedback from the teachers in terms of participants' understanding of the concept(s) shared, aptitude and willingness to implement, and provide reference points for ease of follow-up and monitoring.

Data that is presented in this paper were derived from the teachers' reflective journals. An interpretational analysis was used in order to gain insights into teachers' reflections. Teachers' journals are read and useful comments made, usually imploring them to continually think of what has been shared and tried in their respective classrooms (see appendix A). Therefore, evidence of evolving teachers' understanding and practice (impact evidence) has been captured in their reflective journals.

Before delving into presentation of evidence of the likely impact, there is need to isolate and establish the basis for the expected impact.

Impact base

While looking at impact, it is important to understand the basis for our intervention, and the content/nature of our intervention. Likewise, one can be able to stand back and determine whether the impact has been created or not. From an AKES U point of view, it has an education philosophy and preferred teaching methods expected of every teacher. Paradoxically, the teachers' initial training does not match the expected AKES U practices. The education philosophy and its corresponding teaching methods are based on contemporary education trends (interactive teaching approaches). On the other hand, the teachers who are supposed to implement the philosophy were trained through the behavioural approaches to teaching and learning.

The nature of our intervention is to promote better understanding and practice of interactive teaching methods and approaches, inclusive of which are:

- Understanding of students' role in the teaching learning process;
- Understanding of the school curriculum, eg, purposes, teaching syllabus;
- Promotion of teaching approaches such as project work, inquiry etc;
- Understanding how different children learn and managing students and their behaviour;
- Care for and respect of students as developing human beings;
- Enhancing teachers' professionalism through creation of an understanding of their role as teachers and commitment to duty.

Impact of staff professional development programmes (SPD)

Interpretation of teachers' reflective journal entries and oral comments indicate that impact has been created at different levels: understanding of the AKES education system and philosophy, evidence of teachers' learning and understanding different teaching approaches, apparent change in practice, change in teachers' attitude towards their work and profession. While presenting evidence of the impact created, teachers' journal entries will be cited verbatim. Teachers' initials will be used instead of their real names for the sake of ethical and confidential issues.

Appreciation of SPD

Reading teachers' reflective journals indicates that teachers appreciate staff professional development activities. This is an important opportunity for the AKES school system for it provides fertile ground for teacher development. Some of the appreciations are

presented thus:

> It is worthy having refresher courses like this because it enables one to clear out doubt and improve on the weak areas in classroom activities. I am sure I have consolidated some good ideas and built confidence in myself. I feel there will be more improvement opportunities in handling learners within the AKES philosophy and the national aims of education. The information I earned from the short course is quite educative and guideful [sic]. I feel one is reminded and expands her professional knowledge of teaching e.g. exploring other models of teaching and learning. I think it is quite a good service the administration is doing to us as teachers. The change may not be realized immediately, but later one may see it (NM, 06/02/2002).

> Before being exposed to the nation's philosophy I thought it was far different from AKES but to my surprise, there is no much difference. I feel that what is being done here is the best way of teaching children understand better than the lecture method. It may seem to consume time but still it is so beneficial to the child. I feel that I should try all the methodologies that are exposed to me to improve on my teaching methods. Since we started the week, I am not the same. I have learnt quite a lot. And I feel that all your objectives have been achieved on my side (MK, 05/02/2002).

Evidence of teacher learning

The teacher narratives are indicative of a conceptual change that is beginning to emerge at the theoretical and conceptual level. Most teachers have highlighted evidence of teacher learning. The following excerpts exemplify this:

> Personally, I have gained a lot in the approach on how to handle certain topics, for example, training a child through practical work. Indeed lessons become an enjoyment to both the child and the teacher through the child-centered approach. In all the institutions I have attended, they have been emphasizing that children learn by doing but without action in place. In this workshop, I have had a striking that forces me to use this method. I feel I should carry on the same. This boosts our profession (NM, 28/2/2002).

I have acquired some new skills and techniques in my teaching. When I come to class to teach a lesson, I am not teaching the class but an individual. And I have to plan how I am going to cater for this individual, yet at the back of my mind I have the whole class at hand. That is when I have to promote the teamwork through cooperative learning.

As a teacher, it is really a bit difficult as I am alone handling over thirty individuals. So as I went through this workshop I learnt that if you make them busy and they really understand what to do, I will be monitoring and guiding them only. At the end of the day, the individual child has learnt a lot from both the teacher and the mates (MN, 2/2/2002).

What I have realized is that the philosophy (holistic nature of education) does not only make the learners understand but also lets or gives an opportunity to the teacher to learn both from the child and from his own work. For example, if the teacher carries out practical lessons, in the process of preparing he… they get to understand better the concepts they are going to teach. This is so because it is not unusual that many teachers were taught the cram way and hence may pass on the concepts the way they crammed it (KC, 05/02/2002).

Once such comments are read an effort is made to followup with teachers to check whether there is a corresponding change in their practice. It is at this point that hard evidence is adduced, and as such involves looking at children's work and behaviour during tasks. Below are teachers' comments about their perceived change in practice.

Evidence of change in practice

Although I have been using project approach, the workshop has polished and widened my understanding of the approach especially on how to organize short-term projects. The idea of checkpoints in project approach was new to me and was really a missing link and yet a benchmark to a successful project. I am ready to incorporate the ideas gathered from this workshop as a way forward in the journey of my professional development (AH, 20/09/2002).

… I shall be discussing and sharing my experience with you on my attempt to improve my teaching by implementing my newly acquired methods

and personal creativity. I wish to state it to you right from the beginning that I feel my teaching has improved and I hope with less doubt that it will even be much better. I am now much able to spice up my SST lessons with activities and communication skills that enable me to carry along with me almost each learner in his/her individuality to the end of the lesson. One big challenge I still think of is; why the big range between the high achievers and the below average learners in lesson activities when done individually? (MT, 06/06/2003)

Change in attitude towards professional work

As mentioned earlier, part of our staff professional development aims at enhancing teacher commitment and professionalism. Some of the teachers' journal entries reflect change in their attitude. This has enhanced their outlook to professional duties and responsibilities, hence, understanding and appreciating their own and the school's expectations as reflected below:

> At first I was really annoyed when they took me to P.E., but after some few lessons, Tr. Fred (referring to me), I changed. I realized that in this world we can manage a lot of things and that we are able to handle things we never had speciality in. 'Cause now there are lots of things I have learnt in P.E. and I know my lessons are really enjoyable. I also would like to thank my colleague Mr. Kityo cause he is one person you can work with without any difficulty. Not like some people I have worked with. And I am happy that I am building my CV, which is opening more doors for me now (CK, 30/5/2002).

> I used to enjoy it (missing lessons) sometimes when something interferes and I don't have to teach (sometimes) of course this would mean next week no lesson plan for that particular class because I would have this old one to use. But to be honest I now feel great pain if I plan and I do not use it (teach) due to reasons uncertain (NK, 6/8/2003).

Importance of reflection

Reflective practice has been appreciated by most of the teachers. Some have gone to the extent of continuously entering their journals during the course of their teaching. Some of the comments on use of the journal read:

About the reflections in my journals I learnt a lot. It has taught me how to identify my strong and weak points and also find possible solutions to problems or challenges. When you introduced reflection books you do not know how much stress you lifted off my shoulders that I have carried all these years. And I am a changed person. My dad also knows a lot about you because I keep telling him that am going to discuss with you. It's unfortunate that he is sick and cannot live longer. You have tamed me from the person I was most of the times. Reflecting helps me put down my troubles and fears and that way I do not keep grudges or hate people (NKH, 22/5/2003).

It is long since I reflected and I feel guilty not that I will be punished physically but it had become or is rather a part of me now. A friend I pour my troubles out for discussion and comfort. This book is a friend I share with my joy and sorrows even frustrations and problems (NKH, 10/6/2003).

Challenges to realizing accelerated impact

It needs to be observed that in reality the expected impact does not match the realized impact. This is brought about by a number of factors, some of which include:

Teachers resistance to change

Teachers' comments highly point to their resistance to adapt new ideas. One teacher gave an overview of some of the reasons that can affect realization of impact. She narrates:

> The child-centered approach has a number of opportunities and generally even our parents know that…. Some of the problems we may encounter are time limit, teaching resources, personnel (teachers) and parents' expectations so this approach tends to make the system more effective.

With specific reference to teacher resistance, she reflected:

> … the problem is the attitude of the teachers who are to implement it. They may not be easy to persuade for they also have undergone through different training and they also have their own decisions to make (SS, 05/02/2002).

A perfect example of teacher resistance can be seen in one of the teacher's journal entry that reads:

> Within myself, there has been a tendency of resistance and change to the system as required by AKES. But this can be gradually removed or changed with time. This requires a lot of workshops so that whatever is covered can be applied in class (KP, 05/02/2002).

Teachers' understanding of the ideas seems to be fluid. Even after they have indicated that the ideas shared were hilarious, work well for them, it has been found that such perceptions change with time.

Involving teachers in reflective journal writing has been an attempt to document teachers' evolving understanding of the ideas shared. Teachers verbalize the change they undergo, and most of this is witnessed in their practices. Documenting and disseminating such experiences is still a challenge. For example, teachers always applaud the ideas exposed to them. How does one document such?

The over-emphasis on exams often detracts from the teachers' readiness to use the teaching strategies shared during workshops. Teachers want to see a correlation between child-centered approaches and realization of excellent examination results. No systematic use of such approaches has been witnessed at one particular education cycle so as to be able to determine the students' output. In addition, no study has been conducted in this area. This often results in recourse to transmission of facts which most of the teachers believe assures better exam results.

> Challenges to the teacher mainly lie in making child understand and retain the knowledge so that it could be used in examinations. This seems to be the biggest challenge where at the end of the session, year, the stakeholders need good results from which they need to assess the teachers' ability to teach the children (KP, 06/02/2002).

Coordination of professional development activities and monitoring teachers is another challenge. Experience has shown that when teachers are constantly followed up they tend to implement what was shared. In the absence of someone to monitor them, they tend to have recourse to what they were doing before the intervention. Lack of monitoring and follow-up is brought about by the heavy schedule of the facilitators.

Lack of school administration support tends to impede implementation of the ideas shared hence slackening realization of impact. There is a tendency for some heads to discourage their teachers from use of the teaching strategies. They expect teaching to prevail in particular ways that are in most cases different from what the teachers endeavour to practice. Interestingly, such practices are not demonstrated. Some of the teachers end up getting confused. Whether to teach according to what they have been told to do or the way they feel works for them.

There are incidences where some of the teachers claim to have learnt a lot but fail to implement their learning. In other instances, some claim to have learnt a lot and that the ideas are working well in their classroom. However, when observed or pressed to provide evidence, it is not existent.

In some instances, teachers' reflective journal entries are full of complaints about the school administration and system in terms of low pay, too much workload and lack of respect as professionals. Less of their learning and how they intend to implement it is recorded.

There is an apparent shortage of time for the teachers to learn, reflect and plan and implement their learning. This is brought about by heavy workload where most of the teachers at least teach all the lessons on the timetable.

All the workshops are geared towards enabling the teachers to become more professional -- equipping them with a variety of teaching approaches that can boost students' interest and curiosity. These methods require extra time for planning and meeting students either individually or in small groups. This is constrained by heavy workload as teachers are mostly in classes day long or attending co-curricular activities.

Teachers seem to be demoralized by what they consider to be low pay. Compared to their counterparts in the government system, their pay is quite low, and yet there is no accommodation or transport subsidy provided. This in a way affects the teachers' willingness to put in extra effort and time to meet the demands of the child-centered teaching approaches.

In some instances, some teachers have shown much enthusiasm in pursuing SPD programmes. Upon return from such programmes, little or no enthusiasm to implement their learning has been shown. Worse still, such teachers have not been able to indicate the real reasons hindering them from implementing learnt ideas. It has been observed

that some teachers tend to create obstacles to account for their lack of initiative instead of exploring opportunities around them. Such an attitude tends to slacken implementation of ideas leading to lack of hope for impact.

Way forward

Evidence from the teachers' journals and their own rhetoric extol the service AKESU extends to them. What is comforting is that all the teachers perceive themselves lacking certain skills and competences, which they do not shy from mentioning and appear ready to pursue any programme(s) they feel will enable them to acquire such skills and competences. This is an excellent opportunity on which to base and tailor SPD.

The writing of reflective journals seems to be appreciated by the teachers. Especially, after every SPD some teachers will enter their reflections even when not asked for. This is commendable and needs to be encouraged. Considering the amount of workload it is usually fair to allow them time to enter their journals and submit them at their convenient times.

SPD is considered key in the AKESU's system of thinking and planning. Objectives are set and a sizeable percentage of the school's budget is allocated to SPD. However, in practical terms, the thinking does not match the practice. SPD schedules are the most uncertain. They are often postponed and cancelled, especially the ones planned during the term. Moreover, such SPD are meant for follow up to the ones shared during the holiday time. There is need for the school leadership to foresee and plan properly. Staff development is as important as, if not more than, rehearsing for sports. In any case, such SPD cannot be successful if teachers do not really believe in them and don't have the commitment to do so. It is understood that there are many competing agendas in a school system. The only way forward is not to overlook one activity at the expense of the other, but aspire to attend to all aspects and allot appropriate time to all the activities. In an ever-changing educational environment and dynamic institution expectations keep increasing. This highlights the impetus to constant exposure to new ideas and concepts.

There is a tendency for school systems to only focus attention on teachers. Every time the teacher is the one who has not done this or that. It needs to be recognized that teachers are like "spokes of a wheel." Teachers cannot exclusively work well without the support of the system. This support is in form of providing the resources required, time for teachers to learn and plan for their teaching, appreciation for effort put in rather than threats, understanding that things can sometimes work or not, and a systematic review,

and understanding and appreciation,. of the teachers' welfare.

In addition, there is always a tendency to expect too much within too short a time. It is generally agreed within the realm of educational change literature that change is a slow process. Realization of impact has to be looked at differently for the different individual teachers. The person monitoring and/or following up teachers needs to be elastic to accommodate teachers' differential rate of change adaptation and adoption.

SPD benefits the individual teacher as well as the school system. Moreover, the greatest beneficiary is the teacher. Teachers ought to desist the thinking of "giving in according to how much she/he earns." This is retrogressive thinking which neither benefits the teacher nor the school system. Implementation of ideas should not be pegged on the salary received. Such a view contradicts one of the qualities of a professional -- **service beyond self and having an intent to act in the interests of the clients.**

Teacher-researcher role

The evidence presented above has been gathered during my role as mentor, facilitator and overseer of staff professional development activities -- the teacher education role. Implicit in the way I work with the teachers, plan professional development activities, execute the plan, analyze impact and present it the way I have done in this paper points to performing the teacher-researcher role. Nonetheless, I have been engaged in some research study, for instance a survey on teachers perceptions of their own professional development. Currently, I am engaged in an action research study on student discipline.

Conclusion

This paper has presented evidence of impact created due to on-going staff professional development activities. Such impact include evidence of an appreciation of SPD, teachers' learning, change in practice and importance of reflection. The paper has also highlighted factors responsible for hampering realization of impact. A way forward has been suggested. There has been an attempt to report impact that has been documented in teachers' reflective journals. This has been one of the many ways of documenting impact, others may include video recording teacher conversations, classroom observation report and action research reports to mention but a few. It is hoped that documentation and reporting of impact will remain key in my professional responsibilities. This is an accountability mechanism that I am committed to assuring.

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McNiff, J. (1993). *Teaching and Learning: An Action Research Approach.* London: Routledge.

Van Manen, M. (1995). On the Epistemology of Reflective Practice. *Teachers and Teaching: Theory into Practice, 1.* 38-50.

Teachers' Reflective Journals for:
1. Arinaitwe Hannington
2. Anuradha Mohan
3. Kadaali Patrick
4. Kajubi Milly
5. Kasaato Christine
6. Kawere Charles
7. Mafabi Nancy
8. Nageeba Kasozi Hassan
9. Musiime Twaha
10. Nsereko Mary
11. Sserwadda Susan

Appendix A

MY JOURNAL REFLECTION ON THE TEACHER PROFESSIONAL DEVELOPMENT WORKSHOP HELD ON 30 MAY 2002

Topical issues discussed were:
- Planning for teaching;
- Lesson planning as a heart of classroom teaching;
- Pupils and behaviours in class that affect our teaching;
- The classroom environment that children want.

In the first place, I want to appreciate and uphold the Aga Khan Education System that

rightly understands that learning is a continuous process regardless of one's age and level of education.

The system therefore in my view has provided a rare opportunity of availing teachers with interactive sessions to share their diverse professional challenges and then chat out a course of direction.

I am proud to say the workshop I have gone through have enabled me to increase my professional confidence to deal with the job challenges. And this has helped me to deliver in a relatively better way as a teacher.

Through this workshopI was able to learn and accept that successful teaching is part and parcel of good planning. Indeed, the ability and level of planning has a bearing on both the immediate and cumulative learning outcomes.

I think I was one of the greatest beneficiaries of the two concepts of continuity and progression that were widely discussed and internalized. My biggest mystery was inability to relate homework with the current topic in progress and now through the workshop. I have found out that its vital to give homework that is related with the topic in progress so that homework and class work can really compliment each other and whenever we go through homework its already an introduction of a new lesson of the day.

My findings have tentatively revealed that more pupils participate in homework when this approach is employed than those who used to participate before.

I have now started designing short-term SST projects in form of homework and there is evidence that pupils read widely in order to work on these projects. The dilemma now is how to maintain the projects for sustainable use. In fact, I have also found out that through project work that most parents are involved in helping their children to produce good work, which is also a part of learning.

Through the workshop interaction, I have learnt that understanding children behaviours is critical in the teaching learning process. As I plan my lessons, I always think of suitable activities that can appeal to the children who tend to exhibit indiscipline during teaching learning process.

Therefore, understanding behaviours of children has enhanced my ability to plan effectively and give focused guidance to children. This in my view has yielded positive results.

Sometimes when parents come in to discuss the academic progress of their children with me I am better equipped with accurate information to give to the parent. Thus, the workshop has made a better place to give adequate accountability to parents as well as my supervisors.

As regards the classroom environment, I have tried to instill a sense of self- respect, group and individual accountability and increased involvement in decision-making. In fact, in my own class, 5K, the class helped me to control the two undisciplined children and we all, as a class, collectively boast of the excellent discipline standards. We no longer spend time to settle indiscipline cases.

I therefore think that the way forward on discipline is to study the individual needs of the children and use them as a tool when planning our lesson activities.

All this wealth of experience emanates from the high level interactive discussions we are exposed to during the workshops.

By teacher A.H

Comments by the Facilitator

Arinaitwe,

Thanks for the good work that you are doing in class. Thanks, too, for appreciating the service the institution (AKES, U) is providing to the teachers. It is important to realize that the workshops are intended to enable the teachers to acquire a repertoire of teaching strategies/techniques. It is prudent, therefore, for the teacher participants to implement what they have learnt and inform the workshop organizers and/or facilitators how the implementation is going on and what the possible outcomes are like. This reflective journal is a tool you can use to share your thoughts and experiences. I look forward to reading your continuous reflections.

Fred
15/10/02

A SYMPOSIUM ON IMPACT RESEARCH: ISSUES AND DILEMMAS

Anjum Halai, John Retallick, Fauzia Shamim, & Iffat Farah,
AKU-IED, Karachi, Pakistan

A symposium was organized around three papers discussing issues and dilemmas faced in planning and conducting impact studies. Each paper draws on experiences at AKU-IED. The session was coordinated by Dr. Ifat Farah.

The first paper was based on a recent effort by AKU-IED to develop a plan for studying the impact of AKU-IED programs and discusses issues and questions that came up in doing so. It particularly focused on the various meanings of impact, and the implication of a particular meaning/interpretation on how we study impact.

The second paper discussed some issues arising from an impact study of ADISM conducted in 2002 using an action research method in two schools in Karachi. Two strategies from the ADISM course were identified and each was further developed through action research to seek understanding of how the ADISM graduates shaped and worked with those strategies in their schools. The central dilemma was over the extent to which the impact of ADISM or the influence of action research was being studied.

The third paper addressed the socio-cultural and 'political' dimensions of studying impact of educational reform. Issues and illustrative examples will be drawn from research studies (both completed and in progress) at AKU-IED.

The three discussion papers follow.

PLANNING IMPACT RESEARCH: ISSUES AND DILEMMAS

Anjum Halai

Introduction

Aga Khan University Institute for Educational Development (AKU-IED) was established in 1993. The purpose of establishing AKU-IED and the MEd programme offered by it was to develop models of school improvement through further training and professional development of teachers. Hence, AKU-IED's initial objective was to establish a master's degree programme of quality to develop teachers who would lead whole school improvement. Approaching its tenth year there was a need felt by faculty at AKU-IED, and articulated by other stake holders such as the University's Board of Trustees, to document through systematic research, evidence of impact of AKU-IED inputs. In August 2001, AKU-IED invited Dr. Stephen Anderson, Associate Professor, Ontario Institute for Studies in Education, University of Toronto, to help begin the process of developing a strategic plan for impact evaluation studies at AKU-IED. Dr. Anderson came up with a report putting forward an Impact Action Plan with eight proposals to move further with the conduct of impact evaluation studies at AKU-IED (Anderson, 2001). Subsequently, a group of faculty began to meet regularly as a 'Working Group on Action Plan for Impact Studies' to deliberate on issues pertaining to the study of the impact of teacher education inputs on the schools and the classrooms.

As a result of the work undertaken on the Impact Action Plan a number of impact studies were undertaken at AKU-IED. However, our experience of designing and conducting impact studies raised a number of issues, which I discuss below.

Issues and Questions in Impact Research

Impact as measurable outcomes

To study impact is a difficult endeavor for a number of reasons. A major difficulty is in the dominant philosophy underlying the notion of impact of teaching interventions as "measurable outputs". For example in the current debate in the UK on 'Evidence-Based Teaching', evidence is seen as measurable outcomes. This notion of evidence is based on the problematic assumption that social practices are activities which need to be justified

as effective and efficient means of producing desirable outcomes, and that means and ends are linked directly and causally linked. Furthermore, the determination of means requires a clear, precise pre-specification of ends as tangible and measurable outputs or targets, which constitute quality standards against which the performance of social practitioners is to be judged (Elliot, 2001, p. 560).

Impact as Process of Change

However, social situations are such that variables are in a complex relationship so that variables can neither be isolated nor a direct causal link be established. Instead, impact of an intervention in a social setting such as a school could be seen as a process of change that cannot be assessed simply by measuring "current practice and outcomes", because of the uncertainty about what prior inputs, implementation processes, and contextual factors actually explain why things are the way they are. It is important to explore the "process of change" intervening between the source/inputs and the current practices and status, and the contextual factors influencing the change process in an interactive way throughout the history of the implementation. This would enable an understanding of the process of implementation of the intervention along with the outcomes of the intervention.

Hence, it is essential to problematise the dominant notion of impact as measurable outcomes. Methodologically, for this purpose it would be important to look at actually what happens in the classrooms to understand why the intervention works or does not work. Evidence from case studies and studies using qualitative methodologies could be used to help illuminate why particular interventions are effective i.e. the process issues or the reasons why particular programmes or participant characteristics seem to have an effect on outcomes. One such example is the recently launched research project "Case studies of school improvement in Pakistan". As part of this research, faculty members at AKU-IED are engaged in studying the school as a unit. Schools in the study are carefully chosen from a range of cooperating schools working in collaboration with AKU-IED. A sampling criterion is that the schools be high input schools i.e. schools where AKU-IED has made substantial inputs over a period of time. A purpose is to study the school improvement initiatives undertaken and understand the impact or lack of.

Methodologically, action research studies are also appropriate to provide evidence of impact of interventions because typically they document the process of implementation and of problem solving in the context. At AKU-IED, action research studies undertaken for studying ongoing impact, and reported in this volume, include Halai, Ali, Kirmani,

and Muhammad (2003) and Dean et al. (2003).

Logical Model of Programme Inputs and Outcomes

In his proposal for an Impact action plan at AKU-IED, Professor Stephen Anderson, suggested developing a logical frameworks model. This model is based on the premise that change in student outcomes is logically dependent upon a linked series of prior changes connected to AKU-IED inputs, and that a genuine picture and explanation of the "impact of AKU-IED" would have to explore the nature of impact on these intervening types of variables in the chain.

Subsequently, I developed along with a group of colleagues this logical model of the programme inputs at AKU-IED, their expected outcomes, and the intervening and moderating variables that would need to be taken into account in order to see the impact of the programme inputs on student outcomes.

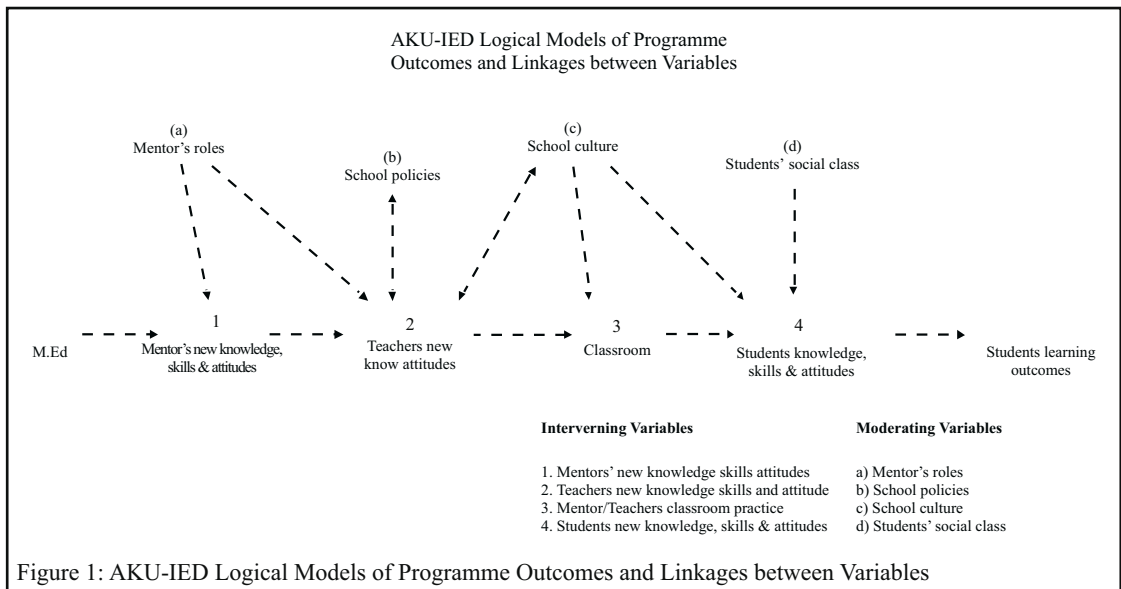Figure 1: AKU-IED Logical Models of Programme Outcomes and Linkages between Variables

Figure 1 above shows a model of the intervening and moderating variables in the case of the master's programme. By intervening variables I mean variables that mediate the programme inputs before the programme effect is seen on the final beneficiary i.e. student outcomes. The intervening variables are the potential areas of impact. For example, in the case of the MEd programme; the intervening variables identified so far include: (1)

MEd students' (mentor's) new knowledge, skills, and attitudes; (2) Teachers' (whom the graduates work with) new knowledge, skills, attitudes (3) MEd Graduates' and/or Teachers' classroom practice; and, (4) Students' new knowledge, skills, and attitudes. However, when the graduates went out to work in the field they took up a variety of roles and responsibilities. Also, the contexts that the graduates worked in were different in a number of ways. But, the decisions regarding the roles that returning graduates would play were not always taken by themselves. Instead they were either decisions taken by other stakeholders in the school or as Halai (1998) found that certain roles were ascribed to the mentors because of the teachers and principals' prior experiences or the ambiguity surrounding the returning mentors' role. Thus, the roles that these mentors took up in the field were moderating or influencing the action and potential impact of their work in the field. Similarly, Khamis (2000) and Jaworski (1996) maintain that the mentors returned to contexts which were different in terms of their readiness to support them in their efforts to initiate change. Hence, these factors such as role variations and contextual differences are moderating variables. By showing the potential areas of impact that mediate the final effect and the moderating variables this model demonstrates how problematic the notion of impact as linear and causal. It shows the significance of studying the 'process of implementation' of teacher education inputs to be able to understand what changes and why.

To conclude, as the action plan for conducting impact studies at AKU-IED went ahead, a number of issues were identified pertaining to the notion of impact, and its methodological implications for studying impact. As a result of these deliberations it is becoming apparent that a simple model of teacher education inputs causally linked to improved student outcomes in the form of better test scores is not a viable model for studying impact.

ACTION RESEARCH AND IMPACT STUDIES: POSSIBILITIES AND DILEMMAS

John Retallick

Introduction

In a recent book titled "Reflective Practice in Educational Research", Evans (2002) from the University of Warwick distinguishes between routine, methodology driven researchers and what she refers to as the 'analytical researcher'. This is analogous to the difference between the routine, technique-driven teacher and the reflective teacher or the restricted professional and the extended professional. She says:

> In relation to educational research this is achieved by a cycle whereby researchers analyse what they do, evaluate their output, seek a better way of doing things where they feel one is needed, and then apply to their research practice as much of that better way of doing things as circumstances permit (p. 19).

One of her major arguments is that educational research often lacks 'conceptual clarity' about what is being researched and it is sometimes only through reflection that a researcher can begin to really clarify the key ideas and terms of the research.

I suspect that some impact research suffers from this problem because we are not too sure what it is that we are looking for when we begin the research. This was largely the case in the study I want to refer to in this paper where we had only a vague idea that we wanted to research the impact of a course but what was meant by 'impact' was not at all clear. So we looked upon it as an exploratory study and now, after completion of the study, I take this opportunity to reflect upon the results.

The Research Study

The study I wish to reflect upon here is titled "The Impact of a Professional Development Program: A Study from Pakistan" (Retallick and Mithani, in press). The research was carried out in the latter half of 2002 in two schools in Karachi and focused on the impact of one particular course, the Advanced Diploma in School Management (ADISM). The

course was designed for aspiring and practicing head teachers to introduce notions of improved educational leadership and management. It was a field-based, modular program that aimed to encourage participants to:

- Reflect critically on school management practices and explore possibilities to enhance the vision of their management practices as pedagogical leaders;
- Understand the organizational dynamics of schools as learning organizations;
- Develop action research and inquiry skills to undertake small scale research projects;
- Develop on-the-job professional development programmes for staff;
- Collaborate with other schools in the wider community; and,
- Develop skills for managing educational change for school improvement (Memon, 1998, p. 26).

A particular concern of AKU-IED in recent times has been researching and evaluating the impact of the programs and this is of increasing concern both here and in other places. For instance, Flecknoe (2002) points out that in England and Wales, Teacher Training Agency funded professional development for teachers must be evaluated for its impact on pupils in schools.

A Framework for Studying Impact

The impact of educational programs may be thought of as a subset of the wider field known as knowledge use or utilisation (Rogers, 1995). Knowledge utilisation encompasses; information dissemination and utilisation, innovation diffusion, interpersonal and mass communication, organisational change and improvement, and, policy and program development and implementation. Whilst distinctions may be made between diffusion and dissemination (Rogers, 1995, p. 7) they both refer to the planned or spontaneous spread of new ideas with a focus on the importance of communication:

> Diffusion is the process by which an innovation is communicated through certain channels over time among members of a social system. It is a special type of communication, in that the messages are new ideas (p. 5).

For the purpose of analysing impact, the term 'consequences of innovations' is useful and refers to "changes that occur to an individual or to a social system as a result of the adoption or rejection of an innovation" (Rogers, 1995, p. 405). The notion of consequences of innovations highlights the potential of impact to be unintended as well as intended. Of course change agents intend to bring about desirable consequences through adoption

of innovations, but there are many examples of unintended consequences or complete failure to adopt an innovation (see Rogers, 1995). The latter has particularly been the case with a great deal of educational innovations over the years.

Rogers (1995) points out that the consequences of innovations have been understudied in the past (as is the case with impact studies in education) and he calls for research that illuminates and explains consequences, not merely assuming that they will be positive. He further points out that the study of consequences requires extended observation over time or in-depth case studies rather than one-shot survey research.

In investigating the impact of AKU-IED programs it is important to consider the working knowledge of teachers and school administrators in Pakistani schools. The knowledge that they bring to their daily work is important because it underpins their practice and revealing that knowledge will help us to understand the basis of the practice. Conceptually, working knowledge can be thought of as having three components. The first is knowledge drawn from educational programs or educational enquiry i.e. research-based knowledge. The second is experiential or craft knowledge; that type of knowledge drawn from practical experience which is regarded as good practice in the profession. The third is local knowledge, that is, knowledge that is based on commonsense understandings of the local context. What is not sometimes understood is that research-based knowledge, which is usually the basis of educational programs, is filtered through the other forms of knowledge in the process of being applied. This is an important issue for impact studies and it means that researchers need to be mindful of the fact that what they see in operation in a classroom for example, is an amalgam of all three forms of working knowledge rather than pure research-based knowledge in practice.

Impact Evaluation

Impact may also be considered from the perspective of evaluation. Owen and Rogers (1999) take the view that "Impact evaluation is predicated on the not-unreasonable view that citizens at large should know whether programs…are making a difference" (p. 263). They argue that the public has a right to know that money spent in the public arena is producing effective social and educational interventions and that programmes, where possible, are meeting their intended goals and not leading to negative side effects. They suggest that impact evaluation has a strong summative emphasis in that it provides findings from which a judgment of the worth of the program can be made. Ideally then, impact evaluations are undertaken on programs that are in a mature or settled stage and have had sufficient time to have an effect.

They further suggest that impact evaluation is concerned with:

- determining the range and extent of outcomes of a program;
- determining whether the program has been implemented as planned and how implementation has affected outcomes;
- providing evidence to funders, senior managers and politicians about the extent to which resources allocated to a program have been spent wisely; and,
- informing decisions about replication or extension of a program.

Guskey (2000) argues that there are five levels of professional development evaluation that should be investigated in relation to impact:

1. Participants' reactions (i.e. Were they satisfied with the program?);
2. Participants' learning (i.e. What did they learn?);
3. Organisation support and change (i.e. Are the teachers being supported in their change efforts?);
4. Participants' use of new knowledge and skills (i.e. Is there evidence of change in classroom or school practice?); and,
5. Student learning outcomes (i.e. What is the benefit for students in terms of improved learning?).

Most evaluation of professional development programs is at level 1. only, i.e. did the participants enjoy or feel satisfied with the program? Deeper impact evaluation is more costly and time-consuming though potentially more illuminating. The most difficult and problematic, but perhaps the most important, is the final level i.e. impact on student learning and achievement.

A Study of the Impact of ADISM

The research produced two case studies, one of which will be reported briefly here. The main research question was: How and to what extent do selected ADISM strategies impact on mid-level managers and their school reform efforts? Action research methodology was chosen as the project is concerned with school reform and that implies change in a school. As Calhoun (2002) points out action research "can generate data to measure the effects of various programs and methods on student and staff learning" (p. 18). Action research is a cyclic process that is concerned with researching interventions whereby both action (that is, change) and research (that is, understanding) are simultaneously achieved. It is a negotiated approach to research where researchers and participants are partners in the process.

Each school was visited on four occasions over a 3-month period and this was followed by a group meeting of researchers and participants at AKU-IED. On each visit an interview was conducted and these were tape-recorded and transcribed. In the first interview a specific school reform strategy initiated by the participant and emanating from the ADISM program was selected as the intervention to be studied. In School A the strategy was reflective journal writing and in School B it was mentoring. I have chosen one excerpt from the case study of School A to illustrate the action research process in action.

The second school visit began with Ms X describing how she learnt about reflective practice during the ADISM course: "I learnt through our instructors as they were giving us lectures and explaining things. Secondly, doing my assignment on reflective practice and during that I went through many books on reflective practice and that really helped me with what is meant by reflection as such. I don't know still that I am very clear on reflection, but whatever I learnt it was through these sources. It was mainly through my assignment and of course writing my reflections during ADISM also."

Ms X mentioned that there were some questions that helped her to reflect: "What had happened to me? Why had it happened? What action I took and why I took that action? These are some of the questions that at times clicked me to think about what was going on and I was not on a track before that. Still I'm not sure that I'm going right or wrong but I feel I am going slightly in a correct direction for reflection. This practice really helped me and it is helping me in different ways also. While I am reflecting on something it gives me a chance to think about whatever I have done and the response I receive from my colleagues or my head or whatever. It is helping me to think on those lines."

When asked if ADISM had changed her practice in the area of reflection Ms X responded: "I can quote you an example. If I ask teachers to do something, such as a strategy we need to follow in class, I ask them to go through this strategy then give me your reflection or feedback about how that thing went in your class and how your students responded. That helps me to come to an assessment about this is something where we are going wrong and if we twist it or turn it like this we might go in a correct direction. I'm not sure if this is reflection or not but these are some of the things which we felt."

We then read some of the teachers' reflective journals and discussion followed about the nature of the writing. It was found to be mostly a general overview of the whole week though some pieces concentrated on a particular episode which enabled the writing to be more specific and disclosed feelings about the situation. Two teachers were then invited to join the discussion. One teacher said: "Writing reflections helps us to see

ourselves in a better way, to observe something carefully and then reflect on it … sometimes if we are facing some problems and we need some help from our head and things like that we can share with our heads. It's a better way that our heads could read this and see what problems we are having".

The other teacher commented: "This reflective practice is very beneficial for me. Whenever I have something in my class I share it, it's a very good thing I think because sometimes we don't have time to come over here (to the VPs office) so just writing is good and we get a very prompt response".

We then suggested a strategy that the teachers might like to try. This was our first action step in action research. The idea was for teachers to focus on a critical incident during the week rather than try to write about everything that happens. There were four questions teachers could use to probe the incident:

- *What happened?*
- *Why did it happen?*
- *What does it mean?*
- *What are the implications for my practice? (Hole & McEntee, 1999).*

We felt that following this protocol might help teachers to sharpen their skills of writing. We also provided an article that explained and gave examples of how teachers might address the four questions.

On the third school visit we began with discussion of the article on reflection. Ms X commented: "Yes, they have really worked on it … though there was confusion over question 3 'What does it mean?' and they were asking me to explain it but I was not sure about it". Ms X was concerned about the focus on one incident: "I was thinking if I ask them just to write on one or two issues, how about their teaching and the problems they are facing in all different subjects. We have one teacher taking all the subjects and how will I know about what issues they are facing in their classrooms … and if I am asking them to write about everything in such depth then it will be too much for them to write and for me also to read". This was followed by a discussion of the purpose of reflective writing and the focus on meaning: "… by doing this we are going in depth and really getting teachers to think about their practice".

Action Research and Impact Studies: Possibilities and Dilemmas

This excerpt from one of the case studies provides us with something we can reflect upon. It illustrates two things in particular. First, the research revealed a good understanding of what Ms X learnt about reflective practice during ADISM and how she had introduced the idea into her school. Second, the intervention made by the researchers to improve the reflective writing shows how an action taken in action research can help to shape and change a practice in a school. This combination of understanding and change is what constitutes action research.

The major point in question in this analysis is the appropriateness of action research method to do an impact study. In my view there are both possibilities and dilemmas inherent in this. Given that action research and impact are conceptually both about change and improvement there would seem to be considerable possibilities. Since action research is an ongoing process, not a one-off visit to a school, it would seem that it would be possible to observe the way that a program impact works its way through a school over a period of time. This was the case with the reflective journals where we saw the development of that practice over a couple of months.

However, action research is an interventionist method. It seeks both understanding and change. Therefore, the dilemma arises over the extent to which the understanding of impact is an artifact of the method itself. For instance if the researchers had not been in the school over those two months, would those developments with the reflective journals have actually occurred. Probably not, it is more likely that some other development would have occurred since such a practice is not static; it evolves and develops over time. But of course we know that any research process is likely to have an effect in the situation being studied, so for me it remains a dilemma.

THE IMPACT OF STUDYING IMPACT
A DISCUSSION PAPER

Fauzia Shamim

'Impact' names the new hegemony: its presumptions and pretensions need to be more closely examined than seems to have been the case thus far. (Fielding, 2003, p. 294)

Introduction

The issue of what counts as impact has been raised by authors of several recent research studies and position papers on impact and/or evaluation of professional development programmes (e.g. Gusky, 2002; Davies & Preston, 2002; Retallick & Mithani, in press). The problems of evidencing impact have also been identified by various researchers engaged in the study of impact, mainly of programs of teacher or professional development (Halai, 2002; Flecknoe, 2002; Burchell, Dyson, & Rees, 2002). Consequently it is now generally accepted that studying impact is not a linear process but more complex due to 'distance' and intervening variables between 'inputs' and 'outcomes' which are mediated by, amongst other things, the specific characteristics of the 'recipient(s)' at the level of individuals, the school and/or the systemic level.

Fielding (2003) draws our attention to two additional issues in examining 'The impact of impact'. First, the 'language' of impact:

> The language of 'impact', whether it is used in a research context or any other social and political arena, foregrounds some things and marginalizes others and we need to be aware of what is affected by this. My sense is that it valorises what is short-term, readily visible and easily measurable. My sense is also that it has difficulty comprehending and valuing what is complex and problematic, what is uneven and unpredictable, what requires patience and tenacity. My sense is that it finds difficulty in distinguishing between levels of change, between what is fairly superficial and what is, to coin another overly over-used, increasingly presumptuous phrase 'transformational', between what in the management literature, is second order rather than first order change (p. 289).

Fielding further goes on to emphasise that language matters, "because in naming it celebrates and excludes, not just in the words it uses, but in the conceptual networks that give meaning to our wider activities and aspiration" (p. 293).

Secondly, he is concerned that the focus on impact will draw us further into "the mindset and practices of performativity" that, in his opinion, have already had a detrimental effect on the "young people of this country [UK]" (p. 289).

At the methodological level, there are also several issues that deserve our attention. The purpose of this discussion paper is to identify some issues relating to the validity of data as it is jointly constructed by the researcher and research participants. More specifically, two issues have been highlighted in this paper. They are: 1) Socially acceptable responses; and 2) the role(s) and 'identity' of the researcher and the relationship between the researcher/mentor and 'clients' influenced by the complex set of 'networks' of which the researcher and researched are members. These issues have arisen specifically in the context of developing AKU-IED's impact research project titled 'Case studies of school improvement' in selected cooperating schools[1] and the research project to study the impact of the Whole School Improvement program of AKU-IED's Professional Development Centre in the Northern Areas of Pakistan (henceforth referred to as the WSIP study) in both of which I am involved as a researcher. Finally, some possible 'solutions' or ways in which we are trying to address these issues in the two research projects mentioned above will be shared to invite discussion from the audience.

Socially acceptable responses

Observer's paradox is a well known phenomenon in educational research. Even when the observers wish to be 'the fly on the wall', they cannot escape the effect of their presence in the room on the behaviour patterns and actions as they unfold during the process of observation. In qualitative research it is therefore recommended that observations be done over an extended period of time to counter the observer's effect. A similar 'effect' seems to be at work in studying impact of educational reforms, particularly at the level of schools and systems which have close and longer-term links with an institution, in this case AKU-IED, which has been instrumental in capacity building for the sample schools. This was first brought to my notice recently when we were trying to find out, quite informally, how teachers in a research and development project in a cooperating

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1 A cooperating school is a school with which AKU-IED has worked for school improvement through capacity building of its teachers and Heads through its various programs.

school of AKU-IED found the experience of participating in the project, mainly in terms of their personal and professional growth. The responses were very positive and rather contrary to the overall research findings. It seemed that the participants were merely giving socially acceptable responses. In my view, this tendency to give socially acceptable responses is exacerbated in impact studies due to the fact that impact evaluation is often linked to funding issues such as decisions about its continuity or withdrawal by donors or 'external' change agents[2]. Alternatively, the participants might feel a genuine sense of obligation towards the 'sponsors' (e.g. AKU-IED or PDCN) who have invested so much of their time, effort and money in introducing school improvement initiatives in their schools and/or systems. Hence there could very well be a feeling that unless some positive effect can be shown they might be held accountable for not 'cooperating' or using the given resources well. Consequently, they might 'see' things differently, in this case more positively, or highlight the achievements only for face-saving thereby influencing the kind of data generated or constructed with the researcher.

Researcher-researched 'identity' and relationships

Who should be engaged in an impact study? In qualitative research it is now widely accepted that the researcher is the main instrument of research as data includes not simply things seen 'objectively' but as 'filtered' through the specific lens of the researcher which can be influenced by a variety of factors such as his/her previous experiences. Similarly, the relationship between the researcher and researched is considered extremely important for getting 'valid' data.

As mentioned above, often impact studies are sponsored by external change agents and/or donor agencies, i.e. people who have financed and/or supported the development and implementation of the reform effort whose impact is being studied. Thus consultants or complete 'outsiders' are brought in for brief visits to study the impact of these educational reforms and reports are quickly produced to facilitate decision making about funding future educational reforms in the same or different areas. The assumption is that the findings of these evaluation studies are both valid and reliable for the purpose of informed decision-making. A second scenario is where the actors themselves engage in studying the impact of a 'reform effort', mainly at the level of classroom techniques or strategies

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2 For example, currently PDCN has allocated a large number of resources to its Whole School Improvement program. The findings of the WSIP impact study may not directly affect the sample schools but would certainly inform future decision-making in regard to resource allocation for this program/model of school improvement both by PDCN and the donors.

through action research (see for example, Retallick & Mithani, in press; Dean et al., 2003; Halai, Ali, Kirmani, & Muhammad, 2003). Now let's consider a third scenario: the focus of the change effort here is a school and the change agents from the University or its associate professional development centre have engaged in frequent and close interactions with the stakeholders not only in introducing the reform but also in supporting its implementation and institutionalization over an extended period of time consequently developing close links with all the stakeholders in the process. The question is: if faculty from AKU-IED and PDCN undertake to study the impact of their change efforts on an ongoing basis, would their role as mentor conflict with their researcher role - the former being developmental in nature while the latter focuses more on 'appraisal' and 'evaluation' and is, therefore, more judgmental in some sense? If the study is undertaken after the 'project is over, to what extent will the data be 'corrupted' by the role-shift from mentor to an impact researcher? For example, in the recently completed research and development study on building communities of practice (CoP) in selected schools over a period of two years, several participants from AKU-IED's cooperating schools shared that they had immense problems in accepting the role of CoP members from AKU-IED as 'equal' instead of the more usual and expected role of an 'expert'. In fact initially some of them were almost afraid of the 'people from AKU-IED' considering them as evaluators of their performance and it took a very long time to build relationships of trust and confidence amongst the participants for them to share their classroom stories and engage in collaborative inquiry on their practice (Farah & Shamim, forthcoming).

Thus, in the impact study of WSIP in Northern areas which is being undertaken after the major intervention phase has been completed in the selected project schools, we have discussed whether it would be appropriate for the 'insiders', i.e. the Professional Development Teachers(PDTs) who worked in these schools, and who already have a relationship of mutual trust and confidence with the stakeholders based on their frequent interactions with them during the different phases of the project to study the impact of their efforts in the same schools and how this might affect the quality of data collected. At the same time we have considered the possible impact of 'outsiders', i.e. researchers who do not have this advantage of previous relationship. Thus, we have debated whether there are good reasons for 'outsiders' to spend time on building these relationships to enable the joint construction of 'valid' data and to what extent can the PDTs play the role of outsider-insider? Additionally we have wondered about the extent to which the responses of the research participants will be governed by their interest in continuing their long-term relationship with colleagues from a reputable institution, in this case PDCN.

Some possible 'solutions'!

Finally, I would like to share some ways in which we are trying to address these issues in two impact studies mentioned above, i.e. the WSIP study and 'Case studies of school improvement' mainly to start a discussion on these issues and to get input from the various stakeholders represented in the audience.

In addition to a rigorous research design allowing for data collection and verification at different stages and through different sources, the participating schools in the WSIP and Case Studies of School Improvement projects have been informed that the findings of the study will not affect the current or future relationship of these schools with AKU-IED and PDCN. Moreover, it has been emphasised that the purpose of these impact studies is NOT to evaluate the participating schools but our own programs and models of school improvement. Additionally, the faculty from PDCN engaged in the WSIP study have decided to conduct their impact research in schools where they were not directly involved in professional development activities during the intervention phase of the project in order to distance themselves from their research participants or to 'make the familiar strange' for ensuring validity of the data collected. However, they still have the benefit of being 'insiders' due to their familiarity with a) the project goals and strategies for intervention; and b) stakeholders from participating schools through other forums at PDCN. Similarly, in the case studies of school improvement project, each researcher has tried to select a case (school) where they have not had frequent opportunities for interaction with the research participants recently.

I hope that the search for impact of the programmatic efforts of AKU-IED and its network of PDCs for school improvement will lead to a greater understanding of these efforts but, more importantly, to the generation of a cumulative body of knowledge on issues related to studying impact of educational reforms in varied contexts.

Acknowledgement

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ACHIEVEMENTS AND CHALLENGES IN CHITRAL

Zulfiqar Ali, Jalal Wali, Mohammad Isamil, Muhammad Khan, & Zubaida Khanum
AKES,P, Chitral, Pakistan

Abstract

So far eight teachers of Aga Khan Education Service, Pakistan (AKES,P), Chitral, have graduated from the AKU-IED and are performing different roles under various capacities. The AKES,P runs 51 schools for girls and provides technical support to more than 30 community-based schools in District Chitral. It has one Regional Education Office and four field offices to facilitate educational activities.

Professional Development Teachers (PDTs) play diverse roles such as training officer, education officer, field operations officer, and head teacher and teacher educator. The management of the AKES,P determines roles for the PDTs according to the needs of the system. Their roles are so diverse and ambiguous that it is really difficult to see the impact in statistical form. In most of the cases, the PDTs play diverse roles in a single position. For example, a headmaster of a school is, at the same time, a teacher, a teacher educator, a team leader, a community developer and a fee collector.

Our presentation and participation in the conference gives us an opportunity to highlight our activities along with the achievements and challenges in Chitral. For this purpose, the PDTs working with AKES,P, Chitral are presenting a joint poster presentation in the conference. The presentation contains pictures of the professional development teachers involved in different activities in the field and gives us an opportunity to present a glimpse of the activities that PDTs are doing in the field.

MATHEMATICS ASSOCIATION OF PAKISTAN (MAP): A NETWORK FOR TEACHERS' LEARNING

Sikunder Ali Baber
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Abstract

Mathematics Association of Pakistan (MAP) came into being on July 4, 1997, after the conclusion of a course with the Andover Dartmouth Institute of Philips Academy, USA. The participants of the course decided to form a forum that would enable them to take charge of their own professional needs on a sustained and ongoing basis.

Since its inception, MAP has initiated several innovative programmes with the aim to create a positive culture of learning of mathematics. Over the period, the qualitative increase in both MAP's programmatic activities and membership demonstrate that the members value its work and see it as a network for the learning of new ways of teaching and learning of mathematics. This increase in membership is coupled with an increasing demand from the stakeholders for more programmes of MAP.

In this presentation, a detailed account will be given of the experiences of MAP. The presentation will also show how MAP is bringing reforms in the education of mathematics in Pakistan through close coordination among the mathematics teachers, curriculum developers and head teachers of different schools in Karachi and beyond.

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A REFLECTIVE PAPER

Yasmeen Bano
AKES,P, Karachi, Pakistan

Abstract

After graduating from the AKU-IED in 1998, I worked as the head teacher of a secondary school and am now working as the Program Officer with a team of PDTs for various schools. In both the roles, I got enough opportunities to work for programme development, teacher education and school improvement. I got opportunities to work in the school as a part of the school staff and I also got a chance to work for the schools as a part of the resource team.

Based on the reflection of these experiences, I have drawn some lessons for school-based teacher educators. The lessons describe what knowledge, skills and attitude facilitate teacher educators in the field. My reflective paper will briefly describe the nature of my work in the field and the 12 lessons learnt. Each lesson will have a description of its importance with anecdotes and examples from my own experiences. At the end, the paper will also describe some recommendation for Teacher Education Institutes, especially for the AKU-IED for designing teacher education programmes.

HEALTH ACTION SCHOOLS PAKISTAN:
TOWARDS SCHOOL IMPROVEMENT

Parvez Pirzado & Health Education Team
AKU-IED, Karachi, Pakistan

Abstract

Health education and promotion is a key determinant of quality education particularly in primary schools in Pakistan. This has been affirmed by an action research project entitled Health Action Schools (HAS) headed by Dr. Tashmin Khamis, based at Aga Khan University Institute for Educational Development (AKU-IED). The HAS project began initially as a three-year (1998-2001) action research project using the Child-to-Child approach in partnership with Save the Children, UK. The objective of the project was to develop prototypes of health-promoting schools in different social and educational contexts in Pakistan.

Initially the HAS project was launched in five pilot schools from various social and educational backgrounds in Karachi. The primary focus of the project was upgrading teachers' skills through continuous training and classroom support, which would contribute to improving children's health knowledge and self-esteem. Results of the pilot project show that the HAS project met success in the area of teacher development, and has contributed towards improving children's health knowledge and skills. Following the successful pilot, the HAS project expanded nationally and regionally through outreach and expansion activities.

Lessons learned from the HAS project have influenced policy and practice and led to the development of health education curriculum and materials and the establishment of a Child-to-Child resource centre at AKU-IED, which aims to support teachers in providing health education.

This poster presentation aims to present the processes and outcomes of the HAS project. The HAS project has contributed remarkably towards schools improvement, and major achievements and challenges of the project will be presented through the findings of the HAS Final Evaluation supported by pictures from schools and training sessions.

THE NEED FOR EDUCATIONAL CHANGE

Zeenat Siraj
The City School Nowshera Branch, Nowshera, Pakistan

Abstract

This paper highlights the efforts made by one private school system in Pakistan to provide education to the girl child. On the basis of her experience in the field of education in NWFP, in Pakistan, and her association with this country wide educational network, the author maintains that the state of female education at all levels, particularly in the backward areas in Pakistan, is a matter of serious concern.

Equity in opportunities of education available to the boys and girls should be an essential focus of efforts in change and improvement in schools and systems. Equity is the removal of systematic barriers so that all students have a fair opportunity to succeed. It means building a system that is proactive in its commitment to a relevant curriculum and equity of outcome for students of: exceptionalities/special needs, gender, perceived ability, race and ethnicity, second language proficiency.

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GLIMPSES OF THE IMPACT OF PDTS IN THE OSH REGION, KYRGYZSTAN

Sadyk Ysmaiylov, Osh State University, Osh, Kyrgyzstan,
Rahat Joldoshalieva, Osh State University,Osh, Kyrgyzstan,
& Gulnara Abdieva, AKES-Kyrgyzstan, Osh, Kyrgyzstan

Abstract

This an interactive poster that presents findings of the Professional Development Teachers (PDTs) from Osh, Kyrgyzstan, in the field of teaching and learning English, as well as professional development of teachers that was carried out by them since they graduated from Aga Khan University Institute for Educational Development (AKU-IED).

This presentation will consist of three parts. The first part will describe findings from the professional development programme, which has been carried out by the English Language Programme (ELP) at the faculty of World Languages at Osh State University. The second part will reveal changes that have been made in the course of teaching English at the above-mentioned university. Finally, the third part will describe attempts taken by another PDT at Osh Aga Khan School.

The Ministry of Education of Kyrgyzstan identified service training programmes for schoolteachers as one of the priorities in its activities. To meet these requirements, the Osh ELP team proposed a four-cohort project to disseminate/embed the principles of interactive communicative approach to teaching English at schools in Osh, Jalal-Abad and Batken regions.

Considering AKU-IED's experiences, the six-week field-based programme was offered to regional teachers. The programme comprised the following components: four-week intensive training-a field-based component during which teachers have been observed by cascading team and observers; and, a two-week component in which participants reflected on their experience and received additional intensive training. A PDT from the AKU-IED Master of Education (MEd) Class of 1999 will share the outcomes of this programme.

In order to help PDTs practice the gained skills of exemplary teacher, teacher-educator

and teacher-researcher, six PDTs, with the support of AKU-IED, work in their host institutions within the project "Researching Practice, Practicing Research". The unique feature of this project is that the PDTs have to train teachers in one strategy and do action research to systemically inquire into their classroom practices. By the end of the first year, the PDTs and teachers were able to analyse and report the findings. The PDTs will share the findings and display some works by the students and teachers related to this project.

As a new system, Aga Khan Education Service-Kyrgyzstan (AKES) established a high school in Osh in 2002. One of the PDTs joined this institution with the aim to conduct professional activities for the newly recruited teachers. In the process of her work, she carried out several workshops to introduce innovative methods of teaching and learning. As the only PDT in the AKES-Kyrgyzstan system, she had successes and also faced challenges in her practice. All these will be reflected in her report and in the interactive poster.

THE MULTIPLE ROLES OF A
PROFESSIONAL DEVELOPMENT TEACHER (PDT)

Tasneem Shabbar Zaidi
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Abstract

School improvement can be conceived broadly as encompassing the whole range of areas related to the school such as curriculum, human resources, the physical environment, and financial resources. Each of these areas, in turn, is itself immensely broad.

This presentation will highlight the particular role played by a Professional Development Teacher (PDT) and Principal in contributing to school improvement in a local trust-operated school. Seventy-six per cent of the staff members of the school are graduates of various programmes conducted at Aga Khan University Institute for Educational Development (AKU-IED).

The focus will particularly be on the purpose and procedures of some specific programmes and activities undertaken towards the attainment of the school's vision.

The paper will highlight the multiple roles of a PDT in areas such as teachers' professional development, administrative matters, and curriculum management with special reference to text books and assessment procedure. In addition to these, some strategies and innovative practices, including comprehensive needs assessment with data related to students' achievement standards, will be shared. The data collected contributed towards making some difference in students' learning outcomes and, in a broad way, to the school culture and structure.

The paper attempts to share some documents related to success stories, learning experiences, and challenges experienced by the PDT while working as a team member with teachers on the school improvement programmes and promoting a learning culture.