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TEACHER EMPOWERMENT THROUGH COLLABORATIVE ACTION RESEARCH: CONCEPTS, POSSIBILITIES AND CHALLENGES

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ABSTRACT

This paper focuses on the process of collaborative action research (CAR) as an approach to teacher empowerment, and on issues and questions that emerged as a result of experience with CAR in Pakistan. This is part of a cross-national five year CAR project in selected schools in Pakistan, Rwanda and South Africa, *Implementing curriculum change for reducing poverty and improving gender equity*, which is studying the process of implementation of curriculum change in science and mathematics classrooms in disadvantaged settings, so that understandings of, and approaches to, poverty alleviation may be developed. A CAR approach has been adopted in this project as it offers a paradigm of change and knowledge generation rooted in the reality of the schools and classrooms and provides nuanced understanding of what constitutes quality in science and mathematics learning in contexts of disadvantage. This paper focuses on work within this project with schools in the District of Thatta, Pakistan, and suggests that field evidence to date shows that CAR is an ethically and technically sound approach to knowledge generation and change because it creates spaces to empower (in this case) teachers in the process of curriculum change through valuing teachers' voice and their involvement in decision making.

CONTENTS

1. INTRODUCTION

Currently there is a wave of educational reform in Pakistan which has led to the development of a new national curriculum and a new scheme of studies introduced in 2006. This education reform with a particular focus on improving the science and mathematics curriculum coincides with similar reform initiatives in South Africa and Rwanda. In all three contexts improvement in quality of the new science and mathematics curriculum is seen through an emphasis on problem-solving, reasoning, logical/critical thinking and a focus on technology. Typically skills like problem-solving, reasoning and logical/critical thinking are developed through a variety of approaches including a focus on discussion, communication and other discursive approaches to teaching and learning.   In the case of Pakistan this is a significant shift because traditionally teaching and learning, for example, in mathematics classrooms is characterised by a focus on rote memorization of rules and their application to produce a "right answer".

A cross national five year (2006-2010) collaborative action research (CAR) project has been initiated in selected schools in Pakistan, Rwanda, and South Africa[1]. A key purpose of this research is to study the process of implementation of curriculum change in science and mathematics classrooms in disadvantaged settings, so that understandings of, and approaches to, poverty alleviation may be developed. In Pakistan the schools are from district of Thatta. Selection of the district was made on the basis of "District Education Index (DEI)". The DEI investigates the dispersion in the educational status of districts irrespective of their economic status and measures the average shortfall from a perfect score of 100 percent. The closer the value of the DEI is to 100, the better endowed it is with respect to education variables (SPDC, 2002-3). Thatta and Tharparkar are in the bottom quintile amongst all districts in Sindh on the basis of the DEI. (SPDC, 2002-03). Between Tharparkar and Thatta, it was decided to conduct the CAR in schools in the District of Thatta as it would be possible to make the school visits in a day, thus reducing the visit costs.

From the nine *Talukas* (sub district unit) of Thatta, *Mirpur Sakro* was selected as it is among the most poverty ridden talukas in the district and is convenient to travel there from Karachi. More significantly it was important to identify schools within a geographical or administrative cluster because the collaborative action research process takes strength from building collaborative networks in the community so that synergies maybe built.

A collaborative action research approach was taken as it offers a paradigm of change and knowledge generation rooted in the reality of the schools and classrooms and provide nuanced understanding of what constitutes quality in science and mathematics learning in contexts of disadvantage. Teacher empowerment was seen in terms of ownership of the problem, participation in the decision making process, developing contextually appropriate responses to problem resolution and considering ways of sustaining the reform initiated. The focus in this paper is on the process of collaborative action research as an approach to teacher empowerment and issues and questions that emerged as a result.

2. THE COLLABORATIVE ACTION RESEARCH PROCESS

The research process which is ongoing is more or less similar across the three countries. It involves regular school visits by the university researchers to work with teacher- researchers in cycles of pre-observation, observation and post observation conference. Lesson observations are recorded for analysis. Focus group interviews, semi-structured interviews with key-stakeholders, document analysis are also employed for data generation. Several approaches have been built into the

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collaborative action research process to support ownership and empowerment of teachers. These are noted below.

2.1 Sensitivity to Issues of Status

It was recognised at the outset that there is a general perception of universities being "higher in status" as compared with schools. Hence, efforts were made by the university-researchers to try to reduce the perceptions of status differential. For example, attempts were made to bring closer the university-researchers and teacher-researchers in terms of language used (jargon free), focus of workshops (honouring practitioner concerns) and the venue for the workshops (schools). Similarly, during the research process it was left to the teachers to decide which lesson and, what elements in the lesson to focus on, in the post lesson discussion. On occasions when lessons were video-taped, it was the teacher's decision to identify the lesson for video recording.

Furthermore, in lesson observations it was not considered necessary that the university researchers would observe and the school teachers would teach. Depending on the situation opportunities were created of co-teaching and co-planning.

2.2 Development Actions not *a priori* interventions

To support ownership of the problems and issues being investigated, the university-researchers worked with teacher-researchers in schools, to locate their concerns and questions within the broad framework of the research project. For this purpose open ended discussions were planned with stakeholders in the school to discuss the current state of science and mathematics education and the issues in implementing the new national curriculum. In addition, a comprehensive literature review was undertaken in the area of science and mathematics teaching in Pakistan. This review highlighted two key foci to facilitate the implementation of the new curriculum for improved quality of science and mathematics learning in classrooms. One, was the focus on cognition involving a shift from rote –recall orientation of learning to a more thinking and problem solving based orientation. The other focus was a sociological focus on reducing disadvantage in terms of gender inequity. To implement the national curriculum, in accordance with these two foci required that the teachers develop a gender equity pedagogy integrating rubrics for problem solving and critical thinking. However, the CAR process did not start with *apriori* interventions. Instead, teachers' development actions were seen to lead incrementally to interventions for promoting problem solving and improving gender equity. For an equity pedagogy in the course of implementing the new curriculum required teachers becoming aware of and questioning some deep rooted beliefs and practices pertaining to gender stereotypes.

2.3 Analytic Tools to Support Reflection

The dual research focus, i.e. cognitive development rooted in the discipline of mathematics and the equity focus suggest some methodological approaches which are more suited to this research purpose. These approaches and techniques included teachers taking a self inventory at strategic intervals in time in the project and engaging in reflective writing based on themselves as learners of mathematics. Some other analytic tools used have been drawn from Mason (2002) and Berge and Hildur (1999) and are described below.

Discipline of Noticing

There are certain practical ways in which teachers can move from concern about their students and what they are learning; concern about their teaching or concern about other elements emerging from the implementation of the new curriculum. The discipline of noticing provides one such practical approach. Noticing an opportunity to act appropriately! This requires three things:

- Being present and sensitive in the moment
- Having a reason to act
- Having a different act come to mind

The discipline of noticing focuses on enhancing awareness by sharpening and enriching those moments when you get a taste of freedom as you participate in a creative moment. It is directed towards the growth of wisdom through knowing to act in the moment (Mason, 2002).

What to notice?
In the context of an equity pedagogy while implementing the new curriculum, the questions to ask are: What am I attending to, moment by moment? What choices are available to me moment by moment? What possible acts could I initiate? What am I sensitised or attuned to notice and what other possibilities might there be? Certain concepts from Berge and Hildur (1999) were adopted to address these questions. These are described as follows:

Noticing moments of normalization and equity
- Moments of normalization which signal resistance to changed gender practices and relationships. These refer to explicit or implicit resistance to such attempts to redefine normal gender relations in the specific context of the classroom.
- Moments of equity when recognizable progress towards gender equity is visible. These refer to occasions when one is aware that gender relations exist and can be transformed. They also refer to pedagogical efforts to promote the long term goal of gender equity. Attempts to challenge the obstacles to gender equity are of course the ultimate consequence.

3. TEACHER EMPOWERMENT: CONCEPTS, POSSIBILITIES AND CHALLENGES

Emerging findings from the first cycle of the CAR indicates that teachers have shown a genuine sense of participation in looking at ways to implement a problem solving curriculum in their classrooms. While there is a range of findings from the project, of relevance to this paper are the concepts, possibilities and challenges to teacher empowerment in the course of CAR.

3.1 Networks and Nodes
An approach taken in the CAR involved forming groups of teacher-researchers willing to engage in systematic inquiry of an issue over a period of time. Experience of AKU-IED in working with action research teams showed that forming clusters of schools within a geographical/administrative unit (district or a taluka) and creating networks to connect the clusters enabled the action research groups to create synergies, provided space and opportunity to the inquiring community to look at an issue from multiple perspectives and come to resolutions which were robust and more largely applicable (e.g. a cluster based mentoring programme in nine district of Sindh and Baluchistan, the Whole school Improvement Programme in Northern Areas of Pakistan)

Schools were selected within one administrative unit to facilitate inter-school collaboration; effort was also made to create clusters and networks for action within school. Towards this end negotiations were undertaken with the headteacher to create space in the school timetable so that the mathematics teachers could meet and work collaboratively to interpret and implement the NC 2006. Although space for collaborative work has been created within schools, it has yet to be achieved at the level of inter-school collaboration so that the process could snowball into a model of change at the level of Taluka.

3.2 Supervisor, Teacher Educator, Co-researcher

For groups, clusters and networks to realize their potential requires a dialogic process be undertaken in a democratic environment which means dealing with issues of power. As our entry negotiations included taking permission from the EDO-E, we were seen as powerful with access to the EDO-E and others in authority. Moreover, in the course of classroom observations we found that we are seen as "supervisors" by the teachers. For example, in some of the lessons plans teachers had included a section "Name of Supervisor". They expected one of the university team member's name to go in that section. Likewise in the post lesson discussion teachers expressed their expectation that the university researchers would "point out the weaknesses" in the lessons observed. When it was suggested that we could together critically analyse the lesson one teacher stated "You may not want to analyse the lesson for us but we see it as our role to teach and your role to analyse". It was clear that teachers did not necessarily see the university researchers as co-inquirers in the process. Rather, they saw them as teacher-educators who had come to "supervise" their lessons.

These observations suggest that structurally space has to be created in the school timetable for the CAR group to meet. There is readiness among the teacher-researchers to take the additional time to inquire into their practice, issues of curriculum implementation at the grass root level are beginning to emerge (as noted in Halai 2007). However, space in terms of an egalitarian participation is yet to be achieved.

3.3 Teachers' Engagement

The first phase of the CAR showed teachers genuinely engaged in the process of problem posing, problem resolution and critique. They planned problem solving lessons with or without the university –researchers, analysed the process of implementation, and identified their strengths and weaknesses in the process. For instance they recognised that improving their own mathematics knowledge would be a first step to effective implementation of a problem solving curriculum. They identified colleagues from among themselves who were more mathematically qualified and used them as local resource persons.

3.4 Time Lapse

The schools are all located in a carefully selected district in rural Sindh. However, the political situation in the region has led to time lapse between one visit and the next. On the one hand these gaps in visits from the university-researchers created the possibility of formulating a within school discourse of continuing with the inquiry and supporting each other in the process. On the other hand it did mean that at times momentum was lost and some time had to be given to cover ground already covered.

4: SUMMARY

To conclude, field evidence to date shows that Collaborative Action Research is an ethically and technically sound approach to knowledge generation and change because it creates spaces to empower (in this case) teachers in the process of curriculum change through valuing teachers' voice and their involvement in decision making.

The space both physically and in terms of teachers opening their practice to others is a significant break through in dismantling teacher isolation and creating networks that would support the implementation of the next stage of the problem solving curriculum in the next phase of the CAR.

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