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A Research Programme Consortium on
Implementing Education Quality in Low Income Countries

**Studying teachers' prioritization of
poverty alleviation and gender equity in
the context of curriculum change**

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Introduction

There is a growing focus within the field of educational research to reflect very deeply upon issues of theory, methodology and ethical dilemmas that emerge within a study. In community based research, not just the ends, but the research process is important, particularly as it relates to issues of who rightfully owns the knowledge produced, and to whose benefit (Setati, 2000; Adler and Lerman, 2003, Halai, 2006). Participatory research offers a radically different approach to organising, collecting and analysing information. It advances knowledge not for knowledge's sake, but also as it facilitates community capacity to deal with particular concerns. For all this philosophical fit to emancipation, PAR presents substantive challenges to initiating, participating in, analyzing, and presenting such research, not least of which is the challenge to the researchers themselves – to rethink the concept of knowledge as necessarily dialectical and evolving (as opposed to authoritative and certain) (Chambers, 1997).

The aim of the paper is to share and discuss these methodological issues, considering the methodological implications of adopting an approach that sees knowledge as embedded in local demands, emerging from specific contexts, and evolving in the life of a project. This approach has brought into sharp focus some serious methodological intricacies and ethical difficulties of PAR as a negotiated research process within the context of a cross national research project.

Recently, a project on implementing curriculum change to reduce poverty and improve gender equity was initiated in order to understand and remove the barriers to achievement for disadvantaged learners in mathematics and science subjects. This is a five year participatory action research project that will be based in South Africa, Rwanda and Pakistan. In South Africa, the Revised National Curriculum Statement expresses the need to move away from a curriculum that reinforced inequality to one that promotes creative, critical citizens leading a productive and self-fulfilling life (DoE, 2002). In Rwanda, the education system is attempting to implement entirely new curricula designed since the genocide of the 1990s. In Pakistan, there are particular gender issues arising in both curriculum design and implementation. These noble ideals are in line with a growing international focus on 'critical thinking skills' meant to enable learners to analyse different aspects of their environment, their circumstances and themselves with a view to improving their practices and circumstances. However, little is known about concerns and priorities arise in the context of implementing these ideals in classrooms (Mwakapenda, 2006). Typical classrooms in South Africa, and many developing countries, are embedded in constraints to delivery such as lack of resources.

Methodological issues

The methodological approach that is being utilised by the project team, Participatory Action Research (PAR), is underpinned by a social democratic purpose to get people involved in improving their social reality in such a way that change can be sustained. Central to the participatory action research is the improvement of the lives of participants. Such improvement is embedded in "intensive study of a situation and the production of knowledge", including informed practice (McTaggart, 1997: 27). Fundamental to PAR is the acknowledgement that improvement is desirable and a commitment that all participants actually do research themselves. Through participatory

methods including meetings, focus groups, observation and journaling, participants reflect on and improve their practice, while the research community comes to a better understanding of the complex social system in which the practice is embedded. Thus the learning and research are immediately relevant (Phelps & Hase, 2002).

Participatory action research represents an epistemology that assumes knowledge is alive and rooted in social relations. Because action research is about bringing improvement in a social situation through participation, it is most suited to an understanding of whether conditions exist for change. Furthermore, because curriculum change is interpreted and adapted in context and through the existing beliefs, and practices of teachers (Fullan, 2001), it becomes important to seek an understanding of how teachers express their concerns and priorities.

At the initial stage of the project, we sought to understand teachers' priorities and concerns as expressed through what we referred to as negotiation of access into their practices. This paper presents these initial discussions of priorities to be pursued within the project and some of the methodological issues relating to what get prioritized in negotiations and the implications for research. While teachers talk is not necessarily equated to an understanding of their practice, it is considered as an important part of their personal identities and the socio-cultural contexts in which they operate. Within a social theory of mind, what teachers talk about, and indeed what they do, "form and are formed by their activities and practices which are social (located in institutions of society), cultural (located in language, symbols and ideas) and have a history" (Adler, 1996). Therefore, teachers' talk is regarded here as an important part of coming to understand, with a view to changing practice, what teachers prioritise and are concerned with in the context of curriculum change.

The discussions followed a series of meetings with teachers who were part of a post-graduate programme at the University of the Witwatersrand. Currently, discussions are in progress with teachers, learners and members of the community, and the aim is to fully negotiate access to schools and come to an understanding of practices. A core group of teachers from six schools in the towns of Springs and Daveyton in the Ekurhuleni Metropole (formerly the East Rand Area), forms the core of our partners. The selection of teachers was purposeful in that these were teachers who were involved in a teacher development programme at the University of the Witwatersrand and had expressed interest in participating in the programme. The convenience of the teachers coming from the same area was not a function of the selection process but has so far served a very important function of rationalizing resources and has possibility of exploring the impact of communities of practice on change (Lave and Wenger, 1991).

The following questions guided the negotiation of access into teachers' practice, an important part of which was coming to an understanding of teachers' prioritization and what informs them:

- What concerns and priorities do teachers express in a context of curriculum change?
- What barriers and possibilities do teachers express in relation to transformative practices in the current mathematics curriculum reform in South Africa?
 - i) How far do these expressions espouse possibilities for addressing poverty alleviation in mathematics classrooms?
 - ii) How far do these expressions espouse possibilities for addressing gender equity in mathematics classrooms?
- What opportunities do these expressions provide for transforming practice?

In the process of addressing these questions, we had to consider what methodological issues the process of negotiating access presented for the research team in relation to the proposed research into curriculum change for poverty alleviation and gender equity. Subsequent phases will continue the research cycles of planning, acting, observing and reflecting, thereby creating possibilities for change and transformation (Kemmis & McTaggart, 2000; Phelps & Hase, 2002).

Findings

As has been indicated, we already had an established relationship with the teachers before the project on curriculum change was initiated. This paper, however, focuses on the firming of the relationship through a more formal discussion of the concerns and priorities of the participants (including parents and members of the neighbouring communities). Our introduction was carefully worded as 'a project in mind' but that 'we would like to find out' from everyone what concerns there were amongst them. We indicated that we were informed that teachers were finding the implementation of the new curriculum difficult, and that we were interested in finding out how teachers were dealing with the new curriculum. However, this interest was 'fluid' and would be shaped by the concerns and interests that would be raised in the meeting. We introduced the general theme of the project as focusing on elements of poverty alleviation and gender equity, with aspects of collaborative work hopefully involving community participation in such critical curricular issues as mathematics and science. It was then agreed that once we had come to a common understanding of what concerns shape our focus, we would then obtain written consent and permission from relevant authorities and individual participants.

The negotiation framed the discussions, sometimes positively and sometimes uncomfortably. The participants provided us with insights about how the project may benefit them more significantly than previous attempts. They argued that typical intervention approaches came to them with ready-made curriculum materials that subsequently failed when they tried them out in their own classroom contexts. The teachers related the story of how presenters had 'workshopped' them on how to prepare lessons in order to address such issues as relevance and critical skills. One teacher argued that:

Preparing a lesson is not "difficult" but the delivery part of it. We need a demonstration of how the lesson is delivered in an actual classroom situation.

The teachers argued that as a result of the superficial support they have tended to receive from typical interventions, they soon revert to what they referred to as their own 'traditional' approaches. Even more firmly teachers expressed the concern with learners whom they argued came into higher grades such as Grade 10 'under-prepared' for the requirements of undertaking mathematics at those grades. This affirmed an earlier request by the teachers that we cannot exclude lower grade teachers from the process. These concerns raised issues of resources and how we may make a profound impact through a project with limited funding. To make a real impact we should undertake a more comprehensive approach. The challenge then is how we would undertake a labour-intensive process such as follow-up support for teachers, including demonstrations and shared teaching, within the funding already allocated to the project.

Participants continued to raise issues of a practical nature:

"The new [curriculum] method needs a good teacher-learner ratio. What can a teacher do when you have a big class to teach?"

These are real concerns framed by such contexts of difficult delivery. One has to then be careful that globally relevant ideals such as scientific and mathematical literacy are framed within these contexts. Although we were open enough to indicate that some barriers to curriculum innovation such as large class sizes may not be addressed within the project, the questions left us with some discomfort. The day-to-day concerns of these participants included request for help with selecting textbooks and with dealing with the expectations from society that they would get their children to pass the matriculation examination in spite of weak student intake. In these specific concerns and priorities was a challenge to demonstrate how we were still addressing the issue of curriculum change for poverty alleviation and gender equity, and particularly how the innovations we come up with could be replicated in other contexts.

Conclusions

It is clear that presented with an opportunity to discuss their concerns in a context of PAR, participants raise issues that are very much embedded in the reality. These concerns raise serious methodological issues and ethical dilemmas. For a start, textbook selection skills appear to be quite mundane in relation to curriculum change. How do we merge our outsider position as project leaders with these insider concerns? In the context of a cross national project would we be able to maintain the importance of such specific concerns for dealing with 'under-prepared' learners and 'large classes'? This presented us with a selection dilemma: What is a worthwhile concern and for whom? Curriculum change, including global concerns with scientific and mathematical literacy, was what framed the original proposal and PAR was bringing up priorities so practical it would appear we were losing sight of the original focus.

The 'fluidity' within which these negotiations were embedded presented serious methodological challenges. Halai (2006) argues that research from a PAR perspective encourages, evolving understanding and flexibility to go into new or different directions within the broad framework. These epistemological and ontological orientations are radically different from the testable hypothesis approach drawn mainly from clinical and medical research. However, the 'fluidity' presented us with a serious dilemma on how we were proposing to measure the impact of a project that was so evolving and so embedded in specific contexts. It is a concern we cannot dismiss that specific issues such as those raised by the teachers may not be easily defended in a cross national project. Yet we have to avoid simply producing neat curriculum materials that are dumped on teachers.

There are possibilities for addressing some of these dilemmas. For example, collaborative team teaching might provide us with opportunities for a community of practice that may form a core source of sustainability and roll out. However, this will require a different orientation that is informed by an acknowledgement that key conditions for going to scale include finding the 'readiness' and desire to change at local contexts and a 'commitment for systematic support' (Sammoff, Sebatane & Dembélé, M, 2001). The negotiations provided us (researchers) with insights about the concerns and priorities that shape teachers' practices. Change, if it is to be meaningful, has to be embedded in these practical concerns. In the long term, textbook selection, no matter how mundane it may appear at first, could be a powerful instrument for addressing gender equity. In addressing teachers' concern with textbook selection we have an opportunity to discuss how one might select a textbook in such a way that it enables curriculum delivery in a relevant and gender-sensitive manner. It is, however, clear that for all its emancipatory powers, PAR is fraught with serious complexities and dilemmas. It is apparent that we have to find another value for our project beyond simplistic measurable outcomes. In particular, ideals such as poverty alleviation and sustainability will be difficult to demonstrate in the life span of the project. However, we are still hopeful that the spirit of excitement and commitment that has defined the involvement of the participants will sustain the project.

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