Scaffolded project work as staff development: Critical reflections on two capacity building programs in India

SUSAN McKENNEY[a] AND ANNETTE THIJS[b]

[a]*University of Twente, Enschede, NL*
[b]*National Institute for Curriculum Development, Enschede, NL*

Abstract This article reflects on the strengths and limitations of two capacity building programs framed around the analysis, design, implementation and evaluation phases of project work. It is based on experiences from two tailor-made programs, both of which aimed to strengthen institutional and individual capacities for designing and delivering primary education in India. The article describes the rationale behind both programs and their basic structures. After presenting findings on participant reactions; participant learning; organizational support and change; and participant use of knowledge and skills, the main issues and dilemmas are discussed.

Introduction and Context

Although education is a basic human right, more than 100 million children around the world still do not go to school. Over a third of these children live in India (Mehrotra, 2006). In the developing world, over 150 million children do not complete five years of schooling, the minimum required for basic literacy. Tackling this challenge requires sufficient(ly) educated teachers, relevant curricula and innovative ways to reach out to children. With a looming global teacher shortage predicted by the Education For All report (Unesco, 2002), there is a strong need to invest in the capacity to educate teachers, particularly those who can train others and develop relevant materials. This article discusses the strengths and limitations of using concrete projects as the backbone of capacity building efforts by sharing lessons learned through the design and delivery of two tailor-made training programs for Indian teacher educators.

The first program lasted two years and was conducted with 20 participants from an NGO that supports teachers in public schools and also offers non-formal education (e.g. pre-schools in slums, classes for child-laborers). The second program lasted one year and involved 10 participants from a private institution offering schooling from kindergarten through university. Throughout both programs, data were collected to answer the following research question: *"What are strengths and limitations of a professional development program for Indian teacher educators that is designed around the project work cycle?"* Core ideas underlying program development are presented below.

Theoretical Foundations of the Study

Adults wish to have a decisive say in the content and process of their learning (Knowles, Holton & Swanson, 1998; Reiman & Thies- Sprinthall, 1998;

Sprinthall & Sprinthall, 1983). Their needs and interests are appropriate starting points for organizing learning activities, and these individual differences among people increase with age. In the field of education, many argue that professional learning only takes place when teachers feel the need for change and are able to relate new knowledge and skills to their existing knowledge and repertoire (Knowles, Holton & Swanson, 1998; Reiman & Thies- Sprinthall, 1998; Sprinthall & Sprinthall, 1983). Oftentimes, experience is the richest source for learning, and experts advocate that a core methodology should be analysis of practice, since changes in teachers' practical knowledge base take place through reflection (Fordham & Fox, 1989; Knowles, Holton & Swanson, 1998; Reiman & Thies- Sprinthall, 1998; Sprinthall & Sprinthall, 1983). Conducted collaboratively, this process can contribute to building a learning community (cf. Lieberman 2000; Sahasewiyon 2004).

Collaborative work which aims to reach a shared organizational goal can simultaneously foster both individual and institutional development. This is due, in part, to the notion that the analysis-design-implementation-evaluation cycle requires thoughtful reflection and contemplation, which can be insightful to individuals and groups (cf. Bergendahl, 2003). It can empower educators as they explore ways to effect change within their own classrooms/schools/districts/ etc. In addition to the immediate benefits that may be gained from well-designed solutions, additional advantages potentially lie in increased enthusiasm, motivation, innovation capacity and confidence. The programs described in this article were designed around the project work cycle, because of its affordances with regard to situated learning, ownership and synergistic individual and institutional development. Theoretical underpinnings for these perspectives are presented below.

Situated learning

Situated learning emphasizes learning within the context of real-world situations. When it comes to the professional development of teacher educators, the need to anchor learning in real-life settings has been highlighted by many (Fullan, 2001; Elmore, 2000; Burbank and Kauchak, 2003). Specifically, research shows (Elmore and Burney, 1999) that successful professional development programs:

- focus on the concrete classroom application of general ideas;
- expose teachers to actual practice, rather than descriptions of theory;
- provide opportunities for group support and collaboration;
- involve deliberate evaluation and feedback by skilled practitioners;
- are accompanied by sustained support;
- build on teachers' current pedagogical and content knowledge; and
- allow for observation, critical analysis, reflection, and evaluation.

Both in pre-service learning (Loughran, 2002) and in in-service learning (Ericsson, Krampe & Tesch-Römer, 1993), experts advocate engaging teachers in 'deliberate practice', purposeful and structured reflection on practice - informed by theory, to enhance teacher competence and reduce gaps in understanding links between theory and practice. The importance of reflection

on practice has been a major issue in teacher learning for the last few decades (Schön, 1983). While few contend that teacher learning should be situated, Putnam and Borko (2000) additionally call for attention to intertwine situated learning with multi contexts, citing as a major threat the years of engrained patterns of thought and action that have become automatic, resistant to reflection or change. They argue that experiences away from the daily setting may be necessary to help teachers 'break set', and experience things in new ways. Workshops can free teachers from the constraints of their own classroom situations and afford them the luxury of exploring ideas without worrying about what they are going to do tomorrow. The suggestion that a combination of approaches, situated in a variety of contexts, holds the best promise for fostering powerful multidimensional changes in educators' thinking and practices, forms one of the basic design principles used to structure the programs presented in this paper.

Ownership/Relevance

Research has shown that active teacher autonomy in professional development is critical (Sandholtz, 1999; Burbank and Kauchak, 2003). This is certainly fostered when participants identify their own needs and wishes for professional development. In his article calling for South African teachers to be setting the in-service agenda, Gray (1999, 265-266) notes, "If any degree of professionalism is to emerge, then the responsibility for ongoing professional development of teachers needs to be shifted fairly and squarely onto the shoulders of teachers themselves, with the authorities and outside agencies playing a secondary, supportive role. Teachers need to own and drive the process and to make decisions about what is to be done." Here too, Borko, Michalec, Timmons and Siddle (1997) caution against wholesale adoption of a singular strong principle. They refer to Richardson's (1992) 'agenda-setting dilemma' where the staff-developer wants to see teachers' practices change in a particular direction while still respecting the teachers' craft knowledge and empowering them to make changes; Richardson stresses the importance of setting the agenda collaboratively. Similar thinking is reflected in the work of Lally, Knutton, Windale, and Henderson (1992), who present a model that features a 'negotiated needs agenda' which, they claim, leads to effective and sustainable change in classroom practice. It involves taking the values and contexts of individual teachers in their own classrooms, with their own pupils as a starting point for in-service education (cf. Crossley, 2001). In line with the views mentioned above, a second design principle shaping the programs described in this paper is the notion that in-service education must be driven by collaboration among the parties involved.

Synergistic institutional and individual development

Teacher research can be a valuable form of reflective inquiry (Burbank and Kauchak, 2003). Especially when it comes to addressing school and classroom improvements, experts often view teachers as architects of study and generators of knowledge (Cochran-Smith and Lytle, 1993). Implicit in this approach is a fundamental recognition of teachers as active and empowered decision-makers

who are valid producers of knowledge. While teacher research can certainly lead to personal insights and even improved classroom practice, the benefits are often confined to the boundaries of individual contexts, limited by individual experiences and perspectives. One way to overcome this isolation is to encourage collaboration with peers (Burbank and Kauchak, 2003). Since many experts consider the establishment of learning communities to be essential to effective professional development (Loucks-Horsley, Hewson, Love & Stiles, 1998), the development of inquiry communities (Cochran-Smith, 2003; Cochran-Smith and Zeichner, 2005; Shulman and Shulman, 2004) seems a fitting extension. Not only does this provide the opportunity to share one's isolated insights, but when groups of educators with different types of knowledge and expertise come together in discourse communities, community members can draw upon and incorporate each other's expertise to create rich conversations and new insights into teaching and learning (Putnam and Borko, 2000).

The programs described in this paper featured small learning communities, whose discourse simultaneously contributed to individual development and – through project activities focused toward an organizational need – institutional development. The notion that capacity development should not focus on the individual level, but also embrace institutional and possibly even social levels has been addressed in literature (Smith, 2005); the study of these programs begins to speak to the call for research on how to "…create and sustain a sensitive and delicate synergy aimed at embodying both individual and institutional values and aspirations," (Penny, Ali, Farah, Ostberg & Smith, 2000, p. 444).

Program Characteristics

Primary school classrooms in India have long been characterized by authority and discipline (Sarangapani, 2003; Smith, Hardman & Tooley, 2005; Sriprakash, 2009). Research has shown that these features are determined by societal beliefs and traditions (Sarangapani, 2003; Clarke, 2003). As part of its work on universal primary education, the Indian government has focused several large scale initiatives on quality improvement, with a notable emphasis on more learner-cantered approaches. While strides are being made, research also shows that some changes may be more superficial, leaving deep-rooted beliefs unchanged. For example, Sriprakash (2009, p. 638) found that, despite the use of a child-centred activities in the classroom, "the controls on pupils and their relationships to knowledge were maintained beneath a child-centred rhetoric." Naturally, teachers are inclined to teach as they have been taught (cf. Smith, Hardman & Tooley, 2005.) Among other approaches to engendering a more learner-centred approach, teachers need to be exposed to the desired style of teaching and learning (cf. Loucks-Horsley et al, 1998). A learner-cantered approach was modelled in both of the capacity building programs described here.

The research described in this paper was carried out during the course of two tailor-made programs, both of which aimed to strengthen institutional and individual capacities for designing and delivering primary education in India. Based on the principles presented in the previous section, the programs were geared towards developing participants' knowledge and skills in initiating and

sustaining learner-centered teaching and learning. In order to meet the multiple aims of expanding participants' expertise in innovative classroom approaches and strengthening their expertise in capacity building, the program stressed: (a) learner-oriented knowledge (learning in the classroom); (b) teacher-oriented knowledge (teacher training); and (c) facilitator-oriented knowledge (training the trainers). In terms of skills, the program aimed to develop competencies needed to carry out the classic phases of instructional design project work: analysis, design, implementation and evaluation (cf. Andrews and Goodson, 1980; Gustafson and Branch, 1997; Salisbury, 1990).

Both programs were designed to reflect a strong belief in *situated learning* and the importance of providing participants multiple opportunities to *own and apply new knowledge* in the target setting. Additionally, the programs were structured to foster *synergistic individual and institutional development*. Situated learning took place through local project work as well as meetings and workshops in India. Ownership and application were fostered through each participant's involvement in a project that was linked to daily work and personal learning needs. The projects provided a vehicle to anchor course learning while participants were away from their home institutions and thereby facilitate the transfer of new insights to each participant's daily work context.

The project work cycle formed the backbone of both programs. Throughout the programs, participants worked on small-scale innovation projects aimed to improve practices within their own organizations. In these projects, participants analyzed their settings and identified areas for improvement; designed an intervention to meet the identified need; facilitated and/or observed implementation; and evaluated its use in practice and reflected on its feasibility. In total, 16 projects were undertaken: 8 were conducted individually, 8 were conducted in small groups. The topics ranged widely, e.g.: developing remedial curricula for maths and science; improving the emotional intelligence of pre-service teachers; developing a reporting infrastructure for a rapidly-growing in-service teacher network; and pre-service teachers conducting action research. In order to guide participants in conducting their projects, the programs contained a combination of both on-site coaching in India and focused time for learning at the training institution in the Netherlands. The structure of both programs reflected the cycle of inquiry that the participants explored themselves when conducting their projects:

Analysis Phase: Group workshops were held in India at the start of each program, with the aims of: getting to know the participants; helping to pinpoint personal and institutional learning needs; and identifying small innovation projects.

Design Phase: After having generated initial ideas for the design of their projects in the period following the analysis workshop, participants traveled to the Netherlands for coursework. The main aims of the coursework were: (1) to broaden participant knowledge; (2) to provide concrete examples of how other forms of education work in practice; and (3) to coach participants in designing their projects and planning for implementation. Both programs included plenary group sessions individual meetings with relevant resource people and guided literature study.

Implementation Phase: After the coursework, participants returned to India to implement their projects. Coaching was offered through email contact.

Evaluation Phase: Facilitators conducted site visits in India to observe project progress. Shortly thereafter, final workshops were conducted in India. These provided the opportunity for participant teams to share their reflections; facilitators and other participants also offered follow-up coaching on ways to sustain, improve and (where relevant) scale-up the project initiatives.

Program Evaluation Objectives and Methods

Mixed methods were used to collect data throughout both programs to answer the following main research question: ""What are strengths and limitations of a professional development program for Indian teacher educators that is designed around the project work cycle?" Guskey's (2000) critical levels for evaluating professional development were used to focus the data collection. Data were collected on four levels: participant reactions, participant learning, organizational support and change and participant application of new knowledge and skills. Because most participants (trainers of trainers, school leaders, etc.) worked with students indirectly, Gusky's fifth level (student learning and outcomes) was not included.

The participants themselves (n=30) served as the primary respondent group. Additionally, observation data were collected by the program facilitators, while interviews were also held with upper management staff. Data were collected during each of the aforementioned program phases: analysis, design, implementation and evaluation. Interview data were primarily obtained during the structured small-group and individual sessions that took place during the workshops in India, and secondarily through more open discussions in the Netherlands. Using semi-open schemes, observation data were collected primarily during the workshop classroom and site visits, and secondarily during participant presentations in the Netherlands. Questionnaires were administered at the end of each main program phase. They contained Likert scales, semi-open and open questions, divided into two basic parts. The 'looking back' part asked participants to reflect on and evaluate the phase just completed. The 'looking ahead' part requested input for the upcoming phase in the program cycle. While participant-produced documents (worksheets, papers and presentations) were analyzed throughout the programs, it was especially those documents produced during the design and evaluation phases that provided data on participant learning and application of new knowledge and skills.

Findings

In this section, the main findings from the different evaluation sources are summarized according to participant reactions; participant learning; organizational support and change; and the use of new knowledge and skills.

Participant reactions

The questionnaires and interviews show that participants were all very positive about the overall quality of the program. Participants viewed the

topics and themes to be closely related to their personal learning and work-related needs. The international flavor of the program had a strong appeal for the participants. The structure of the program was highly valued; both groups described the generic group sessions and the specific individual assignments and coaching as a stimulating balance for their professional development. Observation of the workshops and residency courses show that both groups had a strong desire for group discussion. The questionnaires also showed that participants valued the opportunity for collegial exchange. It should be noted however, that few participants had ever engaged in a professional development program lasting as long as a year, and that international travel was new to most.

Participant learning

Questionnaire and interview data indicated that the programs helped participants to develop new insights on innovative ways of teaching and learning, especially through site visits to Dutch schools. Evaluation results show that participants' biggest jumps were in the area of systematic and logical thinking and planning. The first group of participants appeared to develop a more critical attitude in general; whereas the second group gained more of a sense for the importance of critical and in-depth investigation and reflection.

> Participant from first program: The program has contributed to my logical and systematic thinking. Project-specific challenges should always be taken into account in designing the timeline. The theoretical knowledge matches the thinking processes.

> Participant from second program: I have learned to be more analytical in my approach and I have grown to be more tolerant as a leader.

The program also contributed to the development of specific skills necessary to conduct analysis, design, implementation and evaluation. Both before and after the program, participants ranked their own competencies in these areas using a Likert-type scale (not good at all = 1; not good = 2; just okay = 3; good = 4; very good = 5). In the first program, implementation skills were divided into project management and leadership subscales, respectively; in the second program these were combined into one scale. While the detailed subscales are available in the program reports (McKenney and Thijs 2005; McKenney, Thijs & van Vilsteren, 2003), the overall scores and effect sizes are given below (Tables 1 and 2). The effect sizes (Cohen's *d*) show that first program participants felt that they had especially made learning gains in the areas of design and project management. In the second group, the analysis and design competencies were reported as the areas of greatest learning gains. While facilitator observation data concurred broadly with the participant reporting, the facilitators remained more skeptical regarding the extent of participant knowledge and skills development.

Table 1: *Self-reporting of competencies before and after the first program*

Competency areas	Before M (SD)	After M (SD)	Effect size
Analysis	4.04 (.86)	4.52 (.75)	.594
Design	3.87 (.92)	4.67 (.58)	1.040
Evaluation	3.86 (.8)	4.45 (.6)	.834
Project mgt	3.88 (.85)	4.48 (.51)	1.569
Leadership	4.3 (.62)	4.7 (48)	.721

Table 2: *Self-reporting of competencies before and after the second program*

Competency areas	Before M (SD)	After M (SD)	Effect size
Analysis	3.53 (.68)	4.47 (.26)	1.826
Design	3.41 (.68)	4.41 (.50)	1.676
Evaluation	3.6 (.56)	4.3 (.47)	1.35
Implementation	3.7 (.6)	4.43 (.5)	1.322

Questionnaire findings report that the program greatly enhanced their professional confidence and motivation; and as a result, they feel better able to bring about changes in their own organizations. The increase in self-confidence and self-efficacy was also noted by facilitators, as well as management from both organizations. This is primarily attributed to activities that stimulated critical reflection, namely project work and group discussions about project work. Little criticism was given of how the program could better facilitate participant learning, but both groups said they would have liked even more frequent and more challenging critical feedback on their personal performance.

Organizational support and change

The degree of interest and support expressed by each organization's management influenced the outcomes of the programs. When explicit measures were taken to increase management involvement in the program, clear and concrete participant expectations were formulated and this in turn greatly improved project results. Management involvement also increased dissemination of insights. For example, management requested that participants in the second program report their main insights to the other principals in the organization. After discussion and refinement, 10 core insight areas were selected as improvement priorities for all schools. Another influential factor was the nature of the organizations in which the programs took place. Observations of the workshops show that the work ethos (hard-working, enthusiastic) and learning spirit (eagerness for professional development, also outside office hours) in both organizations contributed positively to the programs. However, organizational dynamics often presented challenges, especially in the first program where continuous organizational growth and restructuring made it difficult for participants to find time for and sustain focus on their project work.

The composition of project teams also mattered, in two main ways. First, any geographical distances between team members presented far greater obstacles to collaboration than anticipated. Teams where all members worked at one site operated much better. Second, teams performed much better when they included both management staff, who had the power to initiate, organize and facilitate

change; and teaching/field staff, who had the experience and feel for action at the classroom level. Finally, the selection of project themes proved critical to the success of the projects. When project themes were related to personal interests, but not sufficiently related to daily professional tasks, the innovation suffered; and when project themes were well-aligned with professional duties, they flourished.

Use of knowledge and skills

Evaluation results show that participants implemented and used their new knowledge in practice. In questionnaires and interviews, participants described the use of new teaching strategies and this was confirmed by project reports and school visits by facilitator/researcher staff. The site visits to schools in the Netherlands inspired them to make modest changes to their school practice. Participants also used various activities that they had experienced during the program (icebreakers, discussion strategies, presentation formats) in their own teaching.

Participants demonstrated varying growth in skills. The first group developed well-written and structured plans for analysis and design activities, but was relatively weak in project implementation. In some cases, this was due to organizational changes which hindered the realization of project goals; in other cases it was because the project focused on longer-term goals; and in a few cases it related to the feasibility of participant collaboration on site (team members working in different locations). This led to more stringent guidelines on the nature and scope of projects selected by the second group. This refinement yielded more evenly balanced development in analysis, design, implementation and evaluation skills. For example, the project presentations and site visits showed that all four projects in the second program resulted in concrete outputs such as materials, tools, instruments, booklets, assessment grids and modest changes in teaching practice as a result of using these materials.

> Participant from first program: [I have applied learnings in my own setting]: 1. Evaluation method: making a questionnaire, asking them benefits, advantages, how what is the monitoring relation to the evaluation; 2. Project management and Work Breakdown Structures - I give them the assignments… in WBS structure and complete them as per WBS; 3. Peer coaching: making the groups reading and sharing the experiences with other colleagues.

> Participant from second program: Important parts of [our organization] have benefitted from this training: 1. use of various methods to evaluate the performance of teacher trainees; 2. use of various activities at the school level; and 3. encouraging research at the college level and forming a knowledge circle.

As previously mentioned, new knowledge and skills were acquired at an organizational level; there is also some evidence to suggest that these have been put to use. In the first program, workshops in India enabled the participants to share program experiences as well as project results with a larger group within the organization. In the second program, several activities were organized to disseminate insights from the program. In addition to the aforementioned set

of 10 improvement priorities based on participant insights, concrete physical changes were visible in schools. These ranged from a new way of using the blackboard, to new and more detailed formats for lesson plans; from new materials to stimulate the sensory development of children, to new playing corners in the classrooms. Moreover, participants acted as resource persons and organized workshops related to their project themes for other staff (e.g. the action research team has been asked to conduct workshops within their organization and for other educational institutions).

Discussion and Conclusions

Reflections on the evaluation findings

In addition to the findings of the study, limitations of the approach bear mention as the results are considered and discussed. First, it should be noted that the findings are based largely on self-reporting data. While personal perceptions were considered essential measures, other, more objective and long term observations might have helped create a more balanced portrait of the program. Second, as most of the data were collected by facilitators within the program, participants could have been more inclined to give socially desirable answers in questionnaires and interviews. Although questionnaires were filled in anonymously and the importance of critical feedback was stressed to the participants, the threat of socially desirable responses cannot be excluded.

While the programs motivated participants to explore new avenues in their projects and thus broaden their knowledge base, it appeared to be more difficult to stimulate critical and in-depth reflection on their personal professional performance and practice. They were more eager to learn about new issues and were less inclined to critically reflect on existing areas for improvement. Moreover, they found it difficult to identify weaknesses related to their personal performance and felt that the program should have done this more for them. The first group of participants would have liked more individual feedback rather than feedback on the group outcomes. The second group, who received more individual feedback, indicated that they would have appreciated even more criticism on individual performance. This is particularly noteworthy because it points to a potential mismatch between program design intentions and participant perceived needs. The programs were based on a collaborative supervisory approach in which instructors stimulate participants to reflect on their performance themselves rather than assess participants' abilities for them (cf. Glickman, Gordon and Ross-Gordon, 2004). The instructors deliberately chose an informal approach with constructive feedback rather than directive comments in order to create a safe environment in which to experiment with new ideas. As literature on supervision and coaching shows (Glickman, Gordon and Ross-Gordon, 2004; Loucks-Horsley et al., 1998; Showers and Joyce, 1996), the presence of a safe and supportive environment greatly adds to the potential for teacher development and educational change. Eraut (2000) also asserts that talking about or reflecting upon the knowledge one is more likely to occur when there is an informal relationship between those involved. Besides personal

companionship and a supportive context, Fullan (2001) also stresses the importance of some amount of pressure. He argues that a mix of pressure and support is needed to encourage teacher development. Looking at the findings from this study, the question is, however: where from the pressure come? Critical feedback by instructors on participants' personal performance may, especially in early stages, have limited their confidence and sense of ownership and thus motivation to participate. Participants own learning needs and wishes were explicitly taken as a starting point in view of enhancing the relevance of the program. This did lead to the desired results: participants valued the relevance of the program and became inspired to develop their practice. However, in terms of critical reflection; implementation of program learnings; and project results, even more pressure would likely have been desirable. Evaluation findings show that active management support within the organizations enhanced the implementation of project results and also contributed to participants motivation to participate. This pressure from within could have been stimulated earlier and more prominently incorporated in the program design.

Given the above-mentioned limitations of the study and reflections on the findings, the following conclusions can be drawn. The programs met participants' individual learning needs and broadened and deepened their knowledge base regarding learning, teaching, and change facilitation. Growth could be noted in their professional skills in the analysis, design, implementation and evaluation of small-scale educational change projects that addressed salient problems in practice, although development was uneven. The programs resulted in completed innovation projects with concrete outputs (plans, reviews, materials, tools), in some cases resulting in modest changes in practice. The programs strengthened the systematic orientation of both individual participants and of the organization as a whole, and provided participants with skills and experience in how to approach project work in practice. If utilization of developed capacity is one of the ways to judge the success of capacity building (King, 1992), then a positive effect might be indicated by the fact that some of the staff are now sought-after as internal and external resources for the expertise they developed through their project work.

Lessons learned

Through reflection on program implementation, and especially on the evaluation findings, original ideas about the use of project work in staff development have been refined. Four main insights are presented below.

Provide flexibility within the program design

While training needs maybe articulated by a requesting organization, there is no substitute for face-to-face visits when it comes to refining understanding of institutional - and certainly individual - learning needs. Moreover, it is difficult to take participants' learning needs into account at an early phase as these needs are often still implicit and require time to evolve and become more specific and explicit during the learning process (Fullan, 2001). Since many capacity building programs are shaped before there is an opportunity to bring all parties together,

sufficient flexibility must be incorporated into the program design so as to be responsive to insights gained through initial face-to-face contact.

The project work cycle allows for such flexibility within a framework. For the delivering organization, this approach offers the opportunity to better understand the target group and hone the design of the program. For the receiving organization, ownership and commitment to the training program can be stimulated as participants see how their own concerns are taken seriously. For the funding organization who requires a high degree of specification in order to decide on fund allocation, allowing such flexibility may seem threatening. Yet failure to create flexible programmatic space to developing real local ownership threatens the internal consistency of most planning documents. The approach of flexibility within the program framework described here strives to temper the discord between the need to create ownership (which includes accepting a degree of uncertainty) and the need for specification in program design.

Balance on-site coaching with off-site exposure and reflection

When it comes to expanding one's professional repertoire, opportunities must be created that allow for (supported) practice in familiar settings, as well as reflection and exposure outside of daily bustle and engrained habits. Coaching teachers on-site is important because it situates learning within a familiar environment, thus facilitating transfer and application of new insights. Additionally, through on-site coaching activities that are conducted with a team, dissemination of insights can be enhanced within the receiving organizations or among a wider audience. Finally, the learnings gained by the instructors while visiting participants within their own settings tend to heighten both commitment and contextual understanding. This also assists instructors in understanding the emotional contexts of participants, as advocated by Leitch and Day (2001). While acting and observing must take place on-site, planning and reflection can be served by (partially) taking place off-site.

Off-site coaching is important because it offers focused time for learning and reflection. Further, as there are limits to how thoroughly one can absorb a totally new idea, some concepts must be experienced to be understood. For example, many Indian teachers from an educational and social culture that emphasizes the 'expertise of the master' have difficulty understanding learner-centeredness beyond a superficial level. In such cases, off-site exposure to learner-centered classrooms can be a powerful medium to demonstrate the reality and ideologies embodied in learner-centered education. Further, when off-site learning takes place in a group, team-building and bonding often starts to take shape, thereby initiating learning communities that can continue to grow beyond the duration of the tailor-made program. When exposure to new or innovative practices is desired, off-site learning can be inspiring and motivating, thus making participants more eager to learn from the program and more committed to use new insights in practice. Lastly, international travel and extended visits in a foreign country offer valuable learning experiences, that can contribute to leadership development as they help foster confidence (especially in women), independence and reflection.

Incorporate direct, practical applications

Particularly when training programs take place outside of the target setting, a vehicle is needed through which participants may experiment with and apply new insights. Practical applications, as developed through the project work not only aid in learning transfer, but can also help to develop a pool of experienced and expert professionals who can act as resource personnel. When conducting applications in groups, leadership and team-working skills may be practiced. This approach also contributes to building nurturing relationships and genuine participation, which are critical aspects of improving educational practice (Brydon-Miller and Maguire, 2009). It enables participants to take an active lead in their own learning process, and can serve to boost to professional motivation and confidence. Finally, well-considered applications can speak to real needs, yielding concrete improvements of and in an organization.

For this to work, we learned that projects need not only to be closely tied to both organizational needs and personal interests, but also to the daily working environment of participants. The focus should be on realistic problems that require practical solutions and relate to the daily work tasks of the participants involved in the team. Team composition is best served by a combination of management and field (e.g. teaching) staff. The management perspective ensures that innovations are created within the teams' jurisdiction to effect change; and the field perspective helps guard the practicality of an innovation. While diversity can be an asset during creative phases of project innovation (such as idea generation and alternative weighing), a team's development and implementation functionality is greatly served by close physical proximity.

Carefully analyze personal and institutional needs

Creating an opportunity to deeply understand both personal and institutional learning needs can make it possible to find fruitful ways to address both, simultaneously. For example, project work can allow individuals to improve planning skills while also yielding an innovation that is needed within an organization. However, hidden tensions, organizational change and institutional agendas can conflict or hinder in the process (McGee 2008; Stark 2006). Strong relations with program leadership are essential to being able to understand and tailor activities to the setting in which they will ultimately be executed. Guskey (2000) also shows how organizational support and change influences the impact of professional development programs. Without recognition, facilitation or support in the organization, participants' use of new learning will hardly take place.

Robinson (2009) notes that practitioner inquiry not linked to formal degree programs rarely have sustained impact. We suspect that this is certainly the case in situations where (clusters of) individuals work with limited support from leadership. However, sufficient motivation for sustained engagement seems possible when an organization prioritizes the practitioner inquiry activities, as was the case in the professional development programs described in this paper. This is only likely to occur when the potential benefits to the organization are well-analyzed and clarified. As has been pointed out previously, the hierarchical

cultural environment must be acknowledged and taken into account (McGee 2008). As program facilitators, we learned that our efforts were substantially more effective when organizational leaders were more explicit about both their expectations and their support. Had we scaffolded this better and earlier, the first round of projects might have been more successful

Closing remarks

This article shows that developing a cadre of teacher educators with expertise in designing and delivering primary education may be served by a program that allows for situated learning and provides multiple opportunities to own and apply new knowledge in the work context. A cycle of analysis, design, implementation and evaluation that is reflected in the activities conducted by participants during concrete small-scale innovation projects in local practice, employing (theoretical) input from the program, can be valuable. Well-chosen project work can contribute to institutional as well as individual capacity building. Together with program management, careful analysis of project areas that are relevant to both the individual participants as well as their organization, is essential to stimulating synergistic capacity building. Although the methodological limitations of the research described in this article should not be ignored, this study does demonstrate that the project work cycle has the potential to facilitate meaningful professional development experiences. The examples described yielded guidelines on how and why project work may be integrated into staff development programs. More work is needed to refine and elaborate the heuristics presented here.

References

Andrews, D. and L. Goodson. 1980. A comparative analysis of models of instructional design. *Journal of Instructional Development,* 3(4), 2-16.

Bergendahl, V. 2003. Action research as a means of professional development: Reflections on research and action in university chemistry education. *Journal of In-service Education,* 29(3), 363-74.

Borko, H., P. Michalec, M. Timmons and J. Siddle. 1997. Student teaching portfolios: A tool for promoting reflective practice. *Journal of Teacher Education,* 48(5), 345-57.

Brydon-Miller, M. and P. Maguire. 2009. Participatory action research: Contributions to the development of practitioner inquiry in education. *Educational Action Research,* 17(1), 79-93.

Burbank, M. and D. Kauchak. 2003. An alternative model for professional development: Investigations into effective collaboration. *Teaching and Teacher Education,* 19, 499-515.

Clarke, P. (2003). Culture and classroom reform: The case of the District Primary Education project in India. *Comparative Education,* 39, 127-144.

Cochran-Smith, M. 2003. Learning and unlearning: The education of teacher educators. *Teaching and Teacher Education,* 19, 5-28.

Cochran-Smith, M. and K. Zeichner (eds.) (2005). *Studying teacher education: The report of the aera panel on research in teacher education.* Mawah, NJ: Lawrence Erlbaum Associates.

Cochran-Smith, M. and S. Lytle (1993). *Inside out: Teacher research and knowledge.* New York: Teachers College Press.

Crossley, M. (2001). Cross-cultural issues, small states and research: Capacity building in belize. *International Journal of Educational Development,* 21(3), 217-29.

Elmore, R. (2000). *Building a new structure for school leadership.* Washington, DC: Albert Shanker Institute.

Elmore, R. and D. Burney (1999). *Investing in teacher learning: Teaching as a learning profession.* San Francisco: Jossey-Bass.

Eraut, M. (2000). Non-formal learning and tacit knowledge in professional work. *British Journal Of Educational Psychology,*70, 113-36.

Ericsson, K., R. Krampe and C. Tesch-Römer (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review,* 100, 363-406.

Fordham, P., & Fox, J. (1989). Training the adult educator as professional. *International Review of Education,* 35, 197-212.

Fullan, M. (2001). *The new meaning of educational change*. 3 ed. New York: Teachers College Press.

Glickman, C., S. Gordon and J. Ross-Gordon (2004). *Supervision and instructional leadership: A developmental approach.* Boston: Allyn and Bacon.

Gray, B. (1999). Guest editorial: Science education in the developing world: Issues and considerations. *Journal of Research in Science Teaching,* 36(3), 261-68.

Guskey, T. (2000). *Evaluating professional development*. Thousand Oaks, CA: Sage Publications.

Gustafson, K. and R. Branch. (1997). *Survey of instructional development models*. Syracuse: Eric Clearinghouse on Information and Technology.

King, K. (1992). The external agenda of aid in internal educational reform. *International Journal of Educational Development,* 12(4), 257-63.

Knowles, M., Holton, E., & Swanson, R. (1998). *The adult learner* (5 ed.). Cambridge, MA: Butterworth-Heineman.

Lally, V., S. Knutton, M. Windale and J. Henderson.(1992). A collaborative teacher-centered model of inservice education. *Educational Review,* 44(2), 111-26.

Leitch, R. and C. Day. (2001). Designing professional development of teachers of science and mathematics. *Journal of In-service Education,* 27(2), 237-59.

Lieberman, A. (2000). Networks as learning communities: Shaping the future of teacher development. *Journal of Teacher Education,* 51(3), 221-27.

Loucks-Horsley, S., P. Hewson, N. Love and K. Stiles. (1998). *Designing professional development for teachers of science and mathematics*. Thousand Oaks, CA: Corwin Press.

Loughran, J. (2002). Understanding self-study of teacher education practices. In *Improving teacher education practices through self study*, eds Loughran, J and Russel, T, 239-48. London: Routledge-Falmer.

Mcgee, A.(2008). Critical reflections of action research used for professional development in a middle eastern gulf state. *Educational Action research,* 16(2), 235-50.

Mckenney, S. and A. Thijs (2005). *Traits final report: Training the trainers for enhancing skills, 128*. Enschede: University of Twente.

Mckenney, S., A. Thijs and C. Van Vilsteren (2003). *Indeed final report: Indian-dutch exchange program for educational development.* Enschede: University of Twente.

Mehrotra, S. (2006). Reforming elementary education in india: A menu of options. *International Journal of Educational Development,* 26(3), 261-77.

Penny, A., M. Ali, I. Farah, S. Ostberg and R. Smith (2000). A study of cross-national

collaborative research: Reflecting on experiences in Pakistan. *International Journal of Educational Development,* 20, 443-55.

Putnam, R. and H. Borko (2000). What do new views of knowledge say and thinking have to say about research on teacher learning? *Educational Researcher,* 29(1), 4-15.

Reiman, A., & Thies-Sprinthall, L. (1998). *Mentoring and supervision for teacher development*. New York: Longman.

Richardson, V. (1992). The agenda-setting dilemma in a constructivist staff development process. *Teaching and Teacher Education,* 8, 287-300.

Robinson, M. 2009. Practitioner inquiry in south african schools: What, how and why (not). *Educational Action Research,* 17(1), 121-31.

Sahasewiyon, K. (2004). Working locally as a true professional: Case studies in the development of local curriculum through action research in the context of thai schools. *Educational Action Research,* 12(4), 493-514.

Salisbury, D. (1990). General system theory and instructional system design. *Performance and Instruction,* 29(2), 1-11.

Sandholtz, J. (1999). A comparison of direct and indirect professional development activities. In *Annual meeting of the American Educational Research Association*. Montreal.

Sarangapani. (2003). Childhood and schooling in an Indian village. *Childhood,* 10(4), 403-418.

Schön, D. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.

Showers, B. and B. Joyce (1996). The evolution of peer coaching. *Educational Leadership,* 53, 12-16.

Shulman, L. and J. Shulman (2004). How and what teachers learn: A shifting perspective. *Journal of Curriculum Studies,* 36, 257-71.

Smith, F., Hardman, F., & Tooley, J. (2005). Classroom interaction in private schools serving low-income families in Hyderabad, India. *International Education Journal,* 6(5), 607-618.

Smith, H. (2005). Ownership and capacity: Do current donor approaches help or hinder the achievement of international and national targets for education? *International Journal of Educational Development,* 25(4), 445-55.

Sprinthall, N., & Sprinthall, L. (1983). The teacher as an adult learner: A cognitive-developmental point of view. In G. Griffin (Ed.), *Staff development: Eighty-second yearbook of the national society for the study of education*. Chicago: University of Chicago Press.

Sriprakash, A. (2009). Joyful Learning' in rural Indian primary schools: An analysis of social control in the context of child-centered discourses. *Compare,* 39(5), 629-641.

Stark, S. 2006. Using action learning for professional development. *Educational Action Research,* 14(1), 23-43.

Unesco (2002). *Education for all: Is the world on track?* Paris: Unesco.

Acknowledgements

Dr. Susan McKenney (corresponding author) is assistant professor in the Department of Curriculum Design and Educational Innovation in the Faculty of Behavioral Sciences at the University of Twente. Dr. McKenney's research and teaching explore and supporting the interplay between curriculum development and teacher professional development. Correspondence: Dr Susan McKenney, Department of Curriculum Design & Educational Innovation, Faculty of Behavioural Sciences, University of Twente, PO Box 217, 7500 AE Enschede , the Netherlands. Email: S.E. Mckenney @ gw. utwente.nl

Dr. Annette Thijs is a senior researcher and advisor at the Dutch Netherlands Institute for Curriculum Development. She is program coordinator for the theme ' diversity in education'. Correspondence: Dr Annette Thijs, SLO, Postbus 2041, 7500 CA Enschede, The Netherlands. Email: a.thijs@slo.nl