American Institutes for Research

Academy for Educational Development

Aga Khan Foundation

CARE

Discovery Channel Global Education Fund

Education Development Center

Howard University

International Reading Association

The Joseph P. Kennedy, Jr. Foundation

Juárez and Associates, Inc.

Michigan State University

Sesame Workshop

Save the Children Federation, USA

University of Pittsburgh

World Education

The Patterns and Purposes of School-based and Cluster Teacher Professional Development Programs

Working Paper #1 under EQUIP1's Study of School-based Teacher Inservice Programs and Clustering of Schools

By:

Elizabeth Leu
Academy for Educational Development

April 2004

The most fundamental characteristic of high quality basic education is that it leads to good student learning as defined within a particular education system. As simple as this sounds, good student learning is made up of several elusive and highly complex constructs – quality of education, quality of learning, and, by inference, quality of teaching. Quality of basic education which leads to good student learning is widely thought to be made up of a variety of interlocking factors of which the most important is good quality of teachers and teaching (Boyle, While, & Boyle, 2003; Cochran-Smith & Fries, 2001; Fenstermacher & Richardson, 2000; Lewin & Stuart, 2003; Tatto, Nielsen, Cummings, Kularatna, & Dharmadasa 1993; Tatto, 2000; United States Agency for International Development [USAID] 2002). Recent efforts to improve educational quality in many countries have had an important focus on improving teacher quality. But what is teacher quality? How do we recognize and define it? And, most importantly, how do we create the conditions that encourage it to grow?

Papers in this series of Issues Briefs focus on different aspects of educational quality and teacher quality, emphasizing ways of supporting teacher professional development at the school and cluster level. This paper reviews an important aspect of quality of teachers and teaching and presents a perspective on why inservice teacher professional development programs that take place at more local levels – in schools and clusters of schools - are now favored and widely implemented. The argument is made that the changing structure and location of inservice programs is driven by issues of the quality of teachers within the context of rapid expansion of enrollment, accompanied by two fundamental paradigm shifts within the education sector – (i) the shift in approaches to both student and teacher learning from passive to active learning and (ii) the shift to more decentralized forms of authority, activity, and agency.

The Context of Changing Teacher Preparation and Support Programs

In general, teacher inservice support has been a neglected area in developing countries, with budgets and programs heavily frontloaded in favor of preservice teacher education. Although primary teachers in developing countries frequently have had no formal preparation at all, those who are "qualified" or "certified" usually have had a one- or two-year residential preservice teacher education course at a college. After leaving the preservice institution, inservice professional support is frequently scanty or non-existent.

For example, a survey carried out in Tigrai Regional State of Ethiopia in 1996 revealed that teachers on average had participated in one or two days of inservice activity every ten years.[1] Although this situation changed substantially over the subsequent eight years, things were even worse in 1996 than it appears. The dismal example of one or two inservice experiences in ten years masks the fact that most teachers had never attended any inservice events at all since those who attend workshops tend to be a group of senior male teachers. Junior male teachers and females are more likely to have no inservice support at all in the form of centralized workshops or courses.

---

[1] Survey carried out as part of the USAID-funded BESO Project in September/October 1996.

Over the years, if provided at all, inservice teacher education has relied on occasional large-scale centralized "cascade" or "multiplier"[2] workshops or courses that have the following characteristics: (i) they reach only a small percentage of teachers; (ii) they rely on those who attend the workshops to pass new information on to their colleagues through the cascade or multiplier mechanism; (iii) there is rarely a mechanism in place for the cascade or multiplier to work; (iv) workshops or courses are "expert-driven" in that a desk-bound specialist typically transmits abstract information to teachers; (v) workshops or courses are often based on a series of presentations or lectures and therefore provide negative models of passive learning; (vi) they tend to be *ad hoc* in content and rarely provide a comprehensive learning program for teachers; (vii) they lead to little change in teachers' classroom approaches, in part because they depend on exhortation rather than modeling, process, and structured practice in which teachers play an active role (Boyle et al., 2003).

The cascade or multiplier approach to teacher inservice is particularly ineffective under the circumstances of present reform programs. Reforms have been introduced over the last decade based on a totally new way of teaching and learning. These reforms include an increased emphasis on active-learning, student-focused, critical-thinking and problem-solving approaches. The entire teaching force, including existing and new teachers, must understand and be prepared to implement these new approaches in their classrooms. Finding effective and cost-effective ways of encouraging teacher understanding and change therefore has become a priority for many governments.

Therefore, several elements have come together in recent years that have created the environment for change and prompted us to value and support teachers in new ways. They include

- widespread curriculum reforms that emphasize active learning,
- accompanying necessity of rapid and effective teacher change,
- growing realization of the central role of teacher quality in educational quality,
- career-long ongoing teacher professional development viewed as a necessity in order to improve teacher quality and therefore educational quality,
- rapid expansion of student enrollments requiring much larger numbers of teachers and the necessity of finding ways to support relatively inexperienced or "unqualified" teachers,
- declining quality as a consequence of rapidly expanding quantity of education in the absence of sufficient resources, and

---

[2] Cascade or multiplier workshops are large centralized training workshops that provide a large audience of participants with information of relevance to their practice. The "cascade" or "multiplier" aspect of the workshops is that participants are intended to return to their districts or schools and "multiply" the number of people having the information they obtained at the workshop. This can be an effective strategy for transmitting messages about aspects of educational reform, for example, when mechanisms and support are in place to ensure that the multiplication takes place. This is rarely the case and therefore most frequently the information does not cascade down to lower levels at all. Participants in such centralized workshops frequently return to their schools or their district offices and tell their colleagues "that was a nice workshop" and information flow stops there.

- consequent willingness on the part of governments and donors to invest in teacher quality.

Within this context, policy makers in education are searching for ways to ensure that teachers: (i) understand the meaning of reforms; (ii) know the (often new) subject matter they teach;[3] (iii) can engage students in a range of appropriate new learning experiences; and (iv) work with professionalism and high morale.

School-based and Cluster Professional Development

In response to this challenge, many countries are turning to school-based inservice programs as the primary means of professional support for both updating and upgrading members of the existing teaching force.[4] As described in other papers in this series,[5] these inservice programs follow a wide variety of patterns such as groups of teachers working together to improve their practice at single schools, teachers working together in clusters of several (or many) schools, or combinations of the two.

Facilitation of programs conducted at the school or cluster level is usually highly participatory and is most frequently carried out by the teachers themselves, with the support of materials or modules that have been developed to give basic information and provide suggestions for the guidance and facilitation of participatory sessions. The curricula and content of these inservice programs vary from (i) *ad hoc* and loosely organized, to (ii) partially or wholly structured around teachers' expressed needs, to (iii) highly structured programs that are closely related to the curriculum of preservice teacher education. Programs are supported by a variety of teacher-learning materials including printed materials, radio support, or multimedia kits. Sharing of experience and communal problem-solving are almost always central to these programs.

Frequency of meetings varies widely. In some programs, teachers meet only a few times during a school year. At the other end of the spectrum, a program can involve meetings at the school level that are weekly or several times a week and combined with frequent cluster meetings, perhaps as often as once every few weeks or once a month. Organization and leadership play strong roles in determining how vigorous the program is. Supply of support material plays a role. Degree of system support is very important. Teacher incentives play a role in the success of programs through, for example, covering

---

[3] Examples of "new" subject matter are previously linear subjects that are now integrated in the lower grades, the need to teach all subjects in self-contained classrooms rather than subject specialties, or entirely new subjects within the curriculum such as life skills or civic education.

[4] Updating refers to programs that bring new ideas to teachers and encourage teachers to share ideas and to generate new ideas about good practice. Upgrading refers to more formal programs that have some of the same elements but that offer some form of formal certification or upgrading of qualifications.

[5] A series of papers and issues briefs published under the EQUIP1 Study of School-based Teacher Inservice Programs and Clustering of Schools. Paper #1 is "School- and Cluster-based Teacher Professional Development: Bringing Teacher Learning to the Schools" by D. James MacNeil of World Education. Issues Brief #2 by Matilda Macklin of the Academy for Educational Development is entitled "A Survey of Teacher Inservice and Cluster Programs" is forthcoming.

teachers' costs through payment of per diem and reimbursing travel expenses, certifying teachers for attendance, or officially recognizing and praising teachers' participation. Geography certainly plays a role in how frequently cluster inservice events can take place since teachers in widely dispersed schools in very remote areas probably cannot meet as frequently as those in more densely populated areas.

School-based and cluster inservice programs are very popular with teachers who are accustomed to receiving little professional attention and working in isolation. Teachers welcome information on how to understand and implement reforms for which they have no practical preparation and no available models. Teachers react positively to the opportunity to learn and to the regard for their professional worth that such programs signal.

Changing Patterns of Teacher Inservice Education in Relation to Teacher Learning and Decentralization

Changing patterns of teacher inservice education, as argued above, respond to the need for improved teacher quality in the context of rapid educational expansion and changing educational goals. The shift towards school-based and cluster approaches is also fundamentally related to shifts that have taken place over the last two decades in the way we think about student learning and teacher learning. The central argument in this Issues Brief is that, although school-based and cluster teacher inservice development involves a change in the location, frequency, and structure of teacher inservice education, school-based and cluster professional development is primarily part of two recent paradigm shifts that concern (i) our basic concept of what it means to teach and to learn and (ii) the decentralization of authority and agency to more local levels (Hiebert, Gallimore, & Stigler, 2002).

The following matrices and text will help to illustrate this. The tables compare previous and present approaches to student learning (Table 1), teacher learning (Table 2), the governance and organization of schools (Table 3), and the governance and organization of teacher professional development programs (Table 4).

Student Learning

Table 1

Student learning	
Previous approaches	Present approaches
- Passive learning - Rote memorization - Teacher centered - Positivist base	- Active learning - Use of higher-order thinking skills - Student centered - Constructivist base

The positivist base[6] of much student learning in the past required students to memorize a great quantity of facts and information. The learning was relatively passive and students were usually not required to develop knowledge through discovery, to mobilize information, to apply it, or to use it to solve problems. This kind of student learning was best suited to teacher-centered classrooms in which the job of the teacher was to "transmit" information to students, often most efficiently through "chalk and talk."

The newer constructivist base[7] of student learning requires students not only to know facts and information, but to use higher-order thinking skills, problem-solving, communication and other active-learning approaches to mobilize information and develop knowledge through discovery and analysis. The kind of student learning required within this paradigm is more suited to student-centered teaching that emphasizes encouraging each student to internalize and activate knowledge. Although "chalk and talk" can be a part of this teaching approach, the process never ends just with memorization of facts and information. Particularly in conditions of extreme overcrowding and extreme lack of resources found in many schools in developing countries today, it is useful to think of active learning as intellectual activity rather than learning that involves a great amount of physical activity and student interaction.

Teacher Learning

Table 2

Teacher learning	
Previous approaches	Present approaches
▪ Goal is teachers who are competent in following rigid and prescribed classroom routines	▪ Goal is teachers who are reflective practitioners who can make informed professional choices
▪ Teachers are "trained" to follow patterns	▪ Teachers are prepared to be empowered professionals
▪ Passive learning model	▪ Active and participatory learning model
▪ Cascade model – large centralized workshops or programs	▪ School-based model in which all teachers participate
▪ "Expert" driven	▪ Teacher facilitated (with support materials)
▪ Little inclusion of "teacher knowledge" and realities of classrooms	▪ Central importance of "teacher knowledge" and realities of classrooms
▪ Positivist base	▪ Constructivist base

---

[6] Positivism is an approach to knowledge that regards knowledge as stable and relatively fixed. It emphasizes students knowing particular canons of fixed knowledge as the basis of learning and relatively de-emphasizes issues of perspective, critique, different ways of knowing, and creation of new knowledge.
[7] Constructivism is an approach to knowledge that regards knowledge and learning as more dynamic. It assumes that students know and understand in unique ways and create their own and "new" knowledge. It does not ignore the importance of knowing facts and information, but emphasizes mobilizing that knowledge. In the constructivist notion of learning, knowledge is a more fluid construct, subject to deconstruction, interpretation and reconstruction by the individual learner interacting with both the external knowledge base and his or her knowledge base and the environment.

Approaches to teacher learning have changed in similar ways to the approaches to student learning. Previously the primary goal was to produce teachers who were competent in carrying out prescribed classroom procedures and in "transmitting" or "delivering" knowledge to students. The term "teacher training" arose from within this model,[8] assuming that teachers could be "trained" using a relatively passive learning model to follow set patterns of classroom behavior. The knowledge base of teacher learning was defined and delivered in large-scale workshops by teacher training "experts" with minimal inclusion of teachers' own knowledge and experiences of their school and classroom realities. This approach to teacher learning has positivism at its base.

Teacher learning goals are now different. We now encourage teachers who are reflective practitioners, with sufficient subject-matter knowledge and a grasp of a range of practical approaches so that they can make informed professional choices. Although such a transformation does not happen over night, programs work in the direction of preparing teachers to be empowered professionals. In teaching, as in any other profession, this is achieved not through a passive model of teacher learning but through an active and participatory model of teacher learning.

There is a growing consensus that professional development yields the best results when it is long-term, school-based, and collaborative, actively involving all teachers, focused on students' learning, and linked to the curriculum (Hiebert et al., 2002, p. 3). Such a model of professional development assumes that preservice teacher education is just the first step in a career-long program of professional development. In order to achieve ongoing professional development that reaches all teachers, programs must be more localized. Programs must also be facilitated locally and use, as a matter of central importance, teachers' own knowledge of their practice and the realities of their classrooms and schools. This approach to teacher learning is informed by constructivism and is parallel, not only to newer pedagogies for student learning, but also to experiential learning models that underlie approaches to effective adult learning (andragogy) (Knowles, 1978).

One might argue that student learning and teacher learning are substantially different because of the different ages and levels of maturity involved. Although this would certainly be correct in some aspects, there is an essential similarity between the experiential and discovery-learning models at the center of andragogy (adult learning) and the experiential and discovery learning models at the center of active-learning pedagogy. Kolb's Experiential Learning Model of effective adult learning (Knowles 1978) envisages a cycle of i) experiencing, ii) processing, iii) generalizing, and iv) applying. Adjusted for age and maturity levels, this has characteristics very similar to active learning, problem solving, student-centered and discovery-learning approaches

---

[8] This model accounts for the negative view of the term teacher training in some quarters and the preference for other terminology such as teacher education, teacher preparation, and teacher professional development. For example, there is often an internal contradiction in using the terms "teacher training" and "teacher reflective practice" when referring to newer programs of teacher learning and professional practice.

used successfully with young students. Transferring this analogy to teacher development, Lieberman (1995, p. 591) states

> Although sophistication about the process of restructuring schools and the problems of changing school cultures is growing, it is still widely accepted that staff learning takes place primarily at a series of workshops, at a conference, or with the help of a long-term consultant. What everyone appears to want for students – a wide array of learning opportunities that engage students in experiencing, creating and solving real problems, using their own experiences, and working with others – is for some reason denied to teachers when they are the learners. In the traditional view of staff development, workshops and conferences are conducted outside the school count, but authentic opportunities to learn from and with colleagues inside the school do not.

Governance and Organization of Schools and Classrooms

Table 3

Governance and organization of schools and classrooms	
Previous approaches	Present approaches
▪ Centralized decision-making ▪ Authoritarian school environment and classrooms	▪ More decentralized/ local decision-making ▪ More participatory/ democratic school environment and classrooms

Approaches to school governance have also gone through a profound paradigm shift. Whereas previously schools were embedded within highly centralized systems with little local autonomy, there is presently much more authority decentralized to the school and local decision-making is much more prevalent. The internal organization of schools is undergoing a related shift, although at a somewhat slower pace. The authoritarian character of school and classroom environments is shifting in many schools in the direction of more participatory and democratic school and classroom environments.

Governance and Organization of Teacher Professional Development

Table 4

Governance and organization of teacher professional development programs	
Previous approaches	Present approaches
▪ Centralized ▪ Authoritarian, based on hierarchies within districts and schools ▪ Preservice emphasized	▪ Decentralized at the district / school level ▪ More participatory, encouraging increased school autonomy, accountability, community involvement, and "communities of learning" among teachers and school leaders ▪ Continuum of professional development / inservice emphasized

The governance and organization of teacher professional development programs have undergone shifts that parallel both the devolution of authority to the school level and the changes described above in the underlying notions of student and teacher learning. Inservice teacher development relying previously on more centralized workshops has now shifted to inservice that is more decentralized, either at the district or school levels. Approaches are less authoritarian and more participatory, emphasizing responsibility and accountability at the school level and generating a community of learning at the school level that interacts in an inclusive manner with the surrounding community. In addition, the previous overwhelming emphasis and use of budgets to support preservice teacher education is now undergoing a shift in the direction of conceptualizing teacher development as a career-long continuum with attention and resources now spread in a more balanced way along this continuum.

Conclusions

I have argued above that parallel changes in paradigms of teaching and learning and the shift toward decentralized authority, in the context of rapidly expanding education systems, the need for better quality teaching, and the introduction of widespread reform, have profoundly affected the way we approach teacher learning and therefore the way in which we structure programs to support teacher professional development.

Despite the rapid growth of school- and cluster-based teacher inservice programs in developing countries and their popularity among teachers, there are many outstanding questions about their organization, content, effectiveness, cost, and sustainability. Information is scarce on these issues and what we know is largely anecdotal. Little is known about the comparative costs of different modes and organization of inservice programs and little is known about the sustainability of these inservice programs. Sustainability issues can be obscured by the fact that school-based and cluster programs are widely advocated by and supported by outside donors (Knamiller, 1999). In these cases, the phenomenon of a "project effect"[9] can mask a government's willingness and ability to devote resources to teacher inservice programs when project funding comes to an end. Investigation of all of these issues is imperative if the approach is to continue and to thrive.

While questions persist about effectiveness, costs, and sustainability, the basic issue remains: teacher quality is now seen as central to educational quality. Paradigms of teacher learning central to old models are now profoundly challenged by new understandings of the nature of teaching and learning. Active learning and

---

[9] Project effect means that the support provided by donors for programs makes it difficult to determine a government's commitment to continue a program when the donor support comes to an end and support is withdrawn. Donors' insistence that governments start giving partial support for these programs out of their own funds in order to signal potential sustainability is often unrealistic because governments may not devote scarce resources to programs that are covered by donor support. In these cases, it is not until donor support is withdrawn that is it really known if governments will devote resources to programs initiated with donor support.

decentralization provide a natural coupling that suggests, or even demands, new patterns of teacher ongoing professional development.

The school-based and cluster approach to teacher inservice development, however, is new and is not amenable to the imposition of models. Approaches will and should grow differently in different locations according to local conditions and needs. While further information is needed about the questions of effectiveness, costs, and sustainability, such information should always include the perspectives of teachers, allowing their voices to be heard in judging this new approach to their professional development. Teachers are consistently the best advocates for and (constructive) critics of school- and cluster-based inservice programs. This combination of advocacy and critique is a powerful combination for growth. Teachers have the best ideas for content and for organizing and administering school-based inservice programs, they know what is most relevant to their practice, and, as professionalism grows, they will have the greatest concern for quality. Our experience is that, once started, it is difficult to cancel or close down one of these programs because they are so popular with teachers.[10]

---

[10] The author of this paper worked for seven years with the Tigrai Regional Education Bureau in Ethiopia to develop a school- and cluster-based teacher professional development program under the USAID-funded AED/BESO Project. The program, which is highly popular with teachers, has been taken over by the Regional Education Bureau and has proved to be sustainable.

References

Boyle, B., While, D. & Boyle, T. (2003). A longitudinal study of teacher change: what makes professional development effective? *University of Manchester, Institute for Political and Economic Governance, Working Paper No. 1.* Manchester: University of Manchester.

Cochran-Smith, M. & Fries, M. K. (2001). Sticks, stones, and ideology: The discourse of reform in teacher education. *Educational Researcher, 30:8*, 3-15.

Fenstermacher, G.D. & Richardson, V. (2000). *On making determinations of quality in teaching.* Paper commissioned by the Board on International Comparative Studies in Education of the National Academies/National Research Council.

Hiebert, J., Gallimore, R., & Stigler, J. W. (2002). A knowledge base for the teaching profession: What would it look like and how can we get one? *Educational Researcher*, *31:5,* 3-15.

Knamiller, G. (Ed.) (1999). *The effectiveness of teacher resource centre strategy.* London: Department for International Development (DFID).

Knowles, M. (1978). *The adult learner: A neglected species.* London: Gulf Publishing.

Lewin, K. M., & Stuart, J. S. (2003). *Research in teacher education: New perspectives on practice, performance and policy*. MUSTER Synthesis Report. Sussex: Department for International Development (DFID) Educational Papers.

Lieberman, A. (1995). Practices That Support Teacher Development: Transforming Conceptions of Professional Learning. *Phi Delta Kappan*, April 1995, 591-596.

Tatto, M. T., Nielsen, H. D., Cummings, W., Kularatna, N.G., & Dharmadasa, K.H. (1993). Comparing the effectiveness and costs of different approaches for educating primary school teachers in Sri Lanka. *Teaching and Teacher Education, 9:1*, 41-64.

Tatto, M. T. (2000). *Teacher quality and development: Empirical indicators and methodological issues in the comparative literature*. Paper commissioned by the Board on International Comparative Studies in Education of the National Academies/National Research Council.

United States Agency for International Development (USAID). (2002). *Progress in education, USAID 2000-2001*. Washington, DC: USAID.