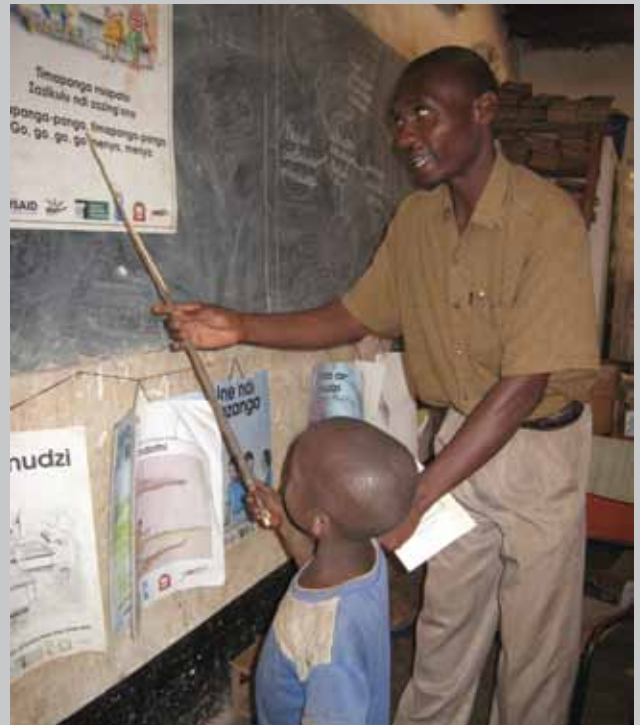Credit: Cassandra Jessee/AIR

First Principles:

Designing Effective Education Programs For In-Service Teacher Professional Development

Digest

In-service teacher professional development includes a wide variety of programs designed to promote and support the professional learning of teachers who are already employed and working in classrooms. The goal of in-service professional development is to improve the knowledge, skills, and commitments of teachers so that they are more effective in planning lessons, teaching, assessing students' learning, and undertaking other responsibilities in the school community. Achieving this goal is critical because the teacher's role is one of the most important factors contributing to high-quality education and successful student learning.

In-service programs come in several forms, with most programs falling within the following two categories:

- Sometimes, "in-service" refers to a prescribed, extended course of study, mirroring the preservice teacher education curriculum and leading to some level of formal qualification for "unqualified" teachers.

- Usually, "in-service" refers to professional development activities for teachers, ranging from continuous, comprehensive career-long programs of teacher learning to occasional, ad hoc workshops.

Both forms of in-service programs are important, particularly in the context of the reforms in teaching and learning that are being introduced in many countries. For instance, the shift from promoting rote forms of learning based on memorization of facts to facilitating more-active forms of learning emphasizing critical, analytical, and problem-solving skills can be successful only if all teachers, regardless of the nature of their initial preservice preparation, understand and have the knowledge and skills to implement new practices in the classroom (Ginsburg, 2010). In-service programs help teachers acquire or deepen their knowledge about the subject matter content, teaching skills, and assessment methods required to implement an existing or a new curriculum as well as assist them in working effectively with parents and other community members.

10 Key principles in developing effective in-service teacher professional development programs

Principles are defined as the foundational concepts, underpinnings, or main ideas that guide a given practice area. The principles outlined below provide a framework for the elements of best practice for in-service teacher professional development. When these are considered during design and implementation, it usually facilitates successful programming.

1. Consider in-service programs as part of a continuum of professional development.

Preservice teacher education and in-service teacher professional development programs should be designed as a whole, a continuum of learning that starts with preservice education; includes periods of school-based inquiry and practice teaching; continues into an induction/mentoring period of introduction into full-time teaching; and is followed up with a continuous program of career-long professional development, support, and supervision. Ideally, each stage builds on previously acquired knowledge and skills, and is informed by teacher performance standards as well as data about teachers' capabilities and their students' performance.

2. Involve teachers in planning programs.

Planning for in-service teacher professional development is normally driven by policy and curriculum reform and organized by national, regional, and local education authorities, perhaps with support and assistance from international donors and nongovernmental organizations (NGOs). However, it is important that teachers be involved in the planning of both the structure and the content of in-service programs to ensure that their needs and their students' needs are being addressed. Such involvement and the inclusion of teachers' realities in program design will promote their ownership of and support for the programs.

Staff of institutions offering preservice programs should also be involved in planning and implementing in-service programs, thus enhancing continuity across phases of professional development and encouraging coordination and collaboration between college and school personnel. School heads and regional or district officers responsible for supervising, supporting, and evaluating teachers should also be part of program planning and implementation and should understand reforms thoroughly. It is important to note that every country deals with planning and implementation of programs in their own unique ways, and as such some variability between countries and programs is likely to exist.

3. Emphasize pedagogical content knowledge in designing program content.

In planning the content of programs to strengthen teaching, it is important to emphasize pedagogical content knowledge, which involves a focus on subject matter content with its implications for pedagogy (planning, instruction, and assessment). Pedagogical content knowledge helps teachers understand curricular content better and be more effective in making a subject comprehensible to students. It serves as a bridge between teachers' knowledge of the subject matter and their knowledge and skill in planning and managing their interactions with students in ways that facilitate learning. Professional development programs will benefit teachers most if they are based on strengthening

teachers' knowledge of subject matter drawn from the curriculum that they are currently using in the classroom, combined with knowledge and practice of a range of teaching methods that encourage student understanding and learning. Professional development programs should also use the relevant language of instruction and enhance teachers' competency in using that language in their teaching. Additionally, professional development programs should use only teaching materials that are available to teachers in their schools. In many cases, teaching materials are extremely scarce. Encouraging the use of low-cost/no-cost materials (pebbles for teaching addition and subtraction or empty water bottles to make a water filter, for example) will help teachers more easily use new concepts in their classrooms.

4. Use adult-oriented models of active learning as the pedagogical design for in-service programs.

Adult-oriented models of active learning, which combine theoretical and practical knowledge acquisition, skill demonstration, and hands-on, practical, learning-by-doing, are most effective in facilitating professional learning for teachers. Using this combination of approaches, with a strong emphasis on practical learning, models—and thus reinforces the learning of—the participatory and discovery approaches that teachers currently are encouraged to use in their own classrooms.

5. Build reflective practice within teacher learning communities.

In-service programs can be structured to emphasize reflective practice, which enable teachers to analyze their own and their colleagues' practice and the effects on learners. Reflection can be informal, by having teachers analyze the effectiveness of each class they teach, or formal, by having organized groups of teachers study practice and its relation to student performance. Action research is one formal approach to reflection, in which individuals or groups of teachers investigate the effectiveness of instructional practices or issues about

student learning (e.g., why girls learn to read more quickly than boys in grade 2). Engaging in reflective practice helps establish teacher learning communities—communities of mutual professional support at the school level—and helps identify teachers as "experts" within their professional area. Teacher learning communities are often central to a system of mentoring through which more-experienced successful teachers give special guidance and support to newer or less-successful teachers.

6. Include all teachers in learning opportunities and base most of the in-service program at the school or school-cluster level.

All teachers should be involved in professional development activities on a regular basis throughout their careers. To be effective and cost-effective, programs should be planned and implemented primarily at the school and school-cluster level, facilitated by the teachers themselves, informed by a variety of professional development materials, and guided and supported by both school administrators (principals in the role of instructional leaders) and local supervisors (dedicated to supporting rather than just inspecting teachers). More centralized workshops at teachers' colleges or district education offices held two or three times a year can be bridged by frequent, structured, school- or cluster-based activities involving teachers in trying out and analyzing or reflecting on the new practice learned in periodic workshops (Barrow et al., 2007).

7. Incorporate strong instructional leadership by school administrators and local supervisors.

School administrators and supervisors also need to participate in parallel or combined continuous professional development programs. This participation will provide them with the same knowledge, skills, and commitments that teachers are developing through in-service programs and will enable them to exercise instructional leadership, that is, provide guidance and pedagogical support to teachers within their schools, clusters, or districts. Because

Ethiopia

Ethiopia has an effective cluster- and school-based teacher in-service continuous professional development (CPD) program, which was initiated in 1996 with ongoing support from USAID. After 5 years of piloting, improving, and gradually expanding—combined with strong teacher advocacy and policy dialogue in support of this approach—the decentralized, cluster-based approach became national policy. It is now implemented by all 11 regional states and city administrations and is a pillar of Ethiopia's General Education Quality Improvement Programme, a $340 million Fast Track Initiative–funded program. The CPD brings teachers together in a combination of cluster-level workshops bridged by school-based teacher learning groups.

supervisors can sometimes be barriers to reforms they do not understand, their participation and leadership role will also provide teachers with a supportive environment to implement new concepts in their classrooms. Such programs can also prepare school administrators and supervisors to engage in action research and other forms of reflective practice in carrying out their roles. Moreover, political will can play a critical role in creating and supporting an environment conducive to strong leadership and management at the local level.

8. Link teacher in-service to a more holistic school improvement approach involving community members in planning for and monitoring of school quality.

School-based or cluster-based teacher professional development is an important element of decentralization[1], especially when linked with school improvement activities that involve both community members and school personnel in assessing, planning, and supporting the schools' programs, teachers' teaching, and students' learning (Gillies & LeCzel, 2006).

9. Successful participation in in-service professional development programs should receive official recognition by the ministry or local authority. This, coupled with demonstrated improved classroom practice, should lead to increased financial rewards and/or advancement on a structured career ladder.

A system of formally recognizing successful participation in an in-service teacher professional development program should be put in place as part of the overall program design. This system should be made part of a teachers' career structure that rewards effort, commitment, and professionalism in addition to improved practice and increased student learning. Although many teachers

NAMIBIA

Namibia has implemented a nationwide School Improvement Program (SIP), developed with assistance from USAID. This program brings together teachers, school leaders, and community members, with support of district supervisors, to develop and monitor the progress of yearly school plans that focus on improved quality of teaching and learning. The SIPs include plans for school-based teacher in-service programs that promote the effective use of the curriculum that emphasizes students' active learning and critical thinking. The strength of this program is based on the schools' cooperative planning of programs and monitoring of results with the community. Learning achievement in schools participating in the SIP proved to be stronger than that in non-participating schools.

are intrinsically motivated to perform their work and to improve their professional knowledge and skill, they, like any other professionals, deserve fair compensation, good conditions of service, opportunities to increase their status and responsibilities, and high regard by society. Conversely, teachers are likely to take note and act accordingly if promotion and remuneration are allocated only on the basis of length of service or political connections rather than participation in in-service programs and improved performance on the job.

In environments where financial or career advancement are not a possibility as a means of recognition, the ministry and local authority can show recognition through other means, like certificate ceremonies or other culturally appropriate public recognition of teachers.

10. Consider budget implications of building realistic and sustainable programs.

All in-service programs, even the most cost-effective, require considerable financial resources. Ministries, in coordination with international donor agencies and local and international NGOs, should be very realistic about the costs of in-service programs and ensure that adequate funding is available to initiate and sustain successful programs for continuous professional development. Cost is the main reason in-service professional development programs are often fragmented, ad hoc, and of varying quality. In some countries, these programs are left entirely in the hands of NGOs or donor-funded programs because of prohibitive cost. There is an urgent need to demonstrate the worth of comprehensive in-service programs through research on their contribution to improved teaching and student learning. A parallel emphasis should be placed on exploring the most cost-effective ways of implementing and sustaining ongoing programs of teacher learning, guidance, and support.

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1 Decentralization refers to the delegation of power and responsibilities from a central authority to regional and local authorities, and is currently occurring in many countries.

7 STEPS IN IMPLEMENTING AN IN-SERVICE PROGRAM

The seven steps below are derived from field experiences and are in line with the principles outlined in the previous section. These are meant to give practical steps to take when designing and implementing effective in-service teacher professional development programs.

1. Include all stakeholders in program design.

Design the program in partnership with the government (i.e., national, provincial, district ministry officials; staff development units), current and potential providers (e.g., colleges of education, NGOs), international donor agencies, the private sector, and beneficiaries (teachers, school administrators, supervisors).

2. Base design on existing policies and programs.

Develop, monitor, and revise programs on the basis of existing in-service policies and programs, current reform agendas, and assessments of the needs of educators and the performance of students.

3. Learn from successful programs in similar countries.

Search for and make available ideas for structure, content, and materials, drawn from successful programs in other similar countries.

4. Design a program that includes all teachers.

Organize in-service programs that reach all teachers at the school or cluster level with frequent (as budget and timing allow) in-service activities, complemented in an integrated manner with local, provincial, national, and international workshops and conferences.

5. Develop good support materials.

Facilitate the collaborative development of support materials for the program to be used when learning in group activities and when adapting and implementing the practices in teachers' classrooms.

6. Start small, learn, and scale up.

Start small and experiment with program design on a pilot basis; monitor and evaluate such efforts; conduct policy dialogue and advocacy for successful programs; and then refine and scale up the programs and the in-service system (working backwards from action to system).

7. Support improvement of teachers' conditions of service.

Engage relevant policymakers and other stakeholders in a dialogue focused on educators' compensation, conditions of service, and career structure to enhance incentives for teachers, administrators, and supervisors to participate in in-service activities, to use what they learn to improve their professional practice, and to remain in the profession. Promote the design of a system that formally recognizes teachers' successful participation in in-service professional development programs.

USAID PERSPECTIVE

USAID recognizes the importance of both pre-service and in-service teacher training. USAID has engaged in in-service teacher training with some support to pre-service teacher training. It recognizes that teacher professional development is critical to improving student learning outcomes and that it is especially important to consider when para-professional teachers are being recruited and deployed in cases of teacher shortages. Furthermore, professional development that focuses on practicing teachers, helps to strengthen the existing educational system, but works best when the training and support are localized and directed at the teachers.

Credit: Cassandra Jessee/AIR

Challenges and Limitations

The challenges outlined below pinpoint some of the problems often encountered when building or improving a teacher professional development program. The challenges occur even when seeking to follow the foregoing principles and take the suggested steps and represent important considerations when designing or implementing a program.

1. Program planning is complex.

Designing in-service programs is complex and requires careful and collaborative planning including a strong voice of teachers, school leaders, and supervisors in planning. Implementation should be phased in so that strong monitoring and evaluation can guide continuing program expansion. This process requires coordinating a complex set of activities and including a large number of stakeholders involved and dedicated to the task.

2. Programs must support the professional growth of new and experienced teachers simultaneously.

Meeting the needs of novice as well as well-experienced teachers in the same program is a challenge. Since professional development should be provided throughout educators' careers, yearly programs must be flexible enough to cover both previously covered topics (for newer teachers), new topics (for all teachers), and specialized or advanced topics (for experienced teachers with particular responsibilities). In other words, the same program cannot be re-run year after year for all teachers.

3. Programs must be planned according to what is affordable in the long run.

Cost is a major problem and often determines whether a program is attempted at all and, if attempted, whether it is successful in the short run and sustainable in the long run. The costs of program design and materials development are considerable, but the main cost is running the program. In many cases, costs include paying educators per diem and travel expenses (when away from their own school). Unless this cost is sustainable, other mechanisms for encouraging participation in programs must be institutionalized. For instance, on a policy level, successful participation in in-service programs could be a requirement for continued employment, or participation and demonstrated improvement in teaching practice could be the criteria for salary increase and promotion. Another strategy might be to involve the private sector in such endeavors, where applicable.

4. Programs should be scheduled according to maximum participation and minimum costs.

Timing is always a challenge and has cost implications. Do teachers and other educators participate in in-service activities during normal working hours (this usually is not permitted), at the end of the school day or on weekends (this often discriminates against female teachers), or on special in-service days (when students do not come to school)? What are the cost implications of programs that require per diem and travel payments? Timing during the calendar year is also a challenge, especially in countries that have different calendars for different regions.

5. Program content must be based on careful consideration of effective and realistic active-learning approaches.

Active-learning principles are now part of many countries' policies of teaching and learning and thus are promoted in most preservice and in-service programs. Because they represent a major paradigm shift, active-learning pedagogies are often misunderstood, partially comprehended, and superficially or poorly implemented. Additional challenges for implementing active-learning pedagogies include a discrepancy between what is taught and what is examined, overcrowded classrooms that make interactive methods difficult, limited instructional materials, and contradictions between the evaluation frameworks that school administrators and local supervisors use and teachers' changing and improving practice.

Credit: American Institutes for Research

Suggested Indicators of Success

USAID uses indicators to measure progress in its programs. The foundation for measuring success of professional development for teachers is improved knowledge, practice, and commitment that lead to better student learning. Following are suggested categories of indicators to guide stakeholders to develop specific indicators relevant to the expected outcomes of their teacher professional development programs.

- Improved teacher practice in accordance with national, regional, and/or district policies or standards (observation)

- Improved teacher knowledge of national policies, subject content, teaching and assessment practices, and relations with parents and community members (interviews and questionnaires/tests)

- Improved teacher commitment and sense of professionalism (observation and interviews)

- Improved student participation in class and demonstration that they are using higher-order cognitive skills (observation, interviews, learning assessments)

- Improved student learning in defined areas (observation, interviews, learning assessments)

Credit: Cassandra Jessee/AIR

Essential Reading

Craig, H., Kraft, R., & duPlessis, J. (1998). *Teacher development: Making an impact.* Washington, DC: USAID and World Bank.

Feiman-Nemser, S. (2008). *Teacher learning: How do teachers learn to teach?* In M. Cochran-Smith, S. Feiman-Nemser, & D. J. McIntyre (Eds.), Handbook of research on teacher education: Enduring questions in changing contexts (3rd ed., pp. 697–705). New York: Routledge.

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First Principles: Designing Effective Education Program for In-Service Teacher Professional Development is part of a series called *First Principles,* which provides guidance for programming in a range of topics in education and development. Topics in the series include:

- Community Engagement
- Early Childhood Development
- Gender
- In-Service Teacher Professional Development
- School Health
- Standards and Assessment

- Curriculum and Instructional Materials Development
- Education for Underserved Populations
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