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The BRIDGES Group includes educators, researchers, planners and policy makers committed to improving opportunity and quality in Third World schools. The goal of their collaborative efforts is to identify policy options that will increase children's access to schooling, reduce the frequency of early school leaving and repetition, improve the amount and quality of what is learned, and optimize the use of fiscal and educational resources.

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**INSERVICE EDUCATION IN THAILAND
KEY INNOVATIONS SINCE 1980
by
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Inservice Education in Thailand: Key Innovations Since 1980

Teachers differ in their commitment to teaching, as they do in their commitment to scholarship, home-school partnerships, and other factors that enhance educational quality. Some of these differences can be accounted for by teacher preparation programs. Some differences might be related to the school climates in which teachers work, while other differences might be directly related to teachers' involvement in ongoing professional development activities.

The wide disparity in teacher performance is made evident by the difference in student achievement in urban and rural schools in Thailand. The supply of qualified teachers is disproportionately lower in rural areas of the country (Shimshoam and Jit-aree, 1984; Amornlertsinthai, 1984; Wuthisen, 1984), resulting in a disparity between the quality of education in Bangkok as compared to areas of rural Thailand (Department of Curriculum and Instruction Development, 1986).

Improving educational quality at the primary level is a major goal of the sixth five-year Education Development Plan (1987-1991) of Thailand. In addition to an increased commitment to improve overall educational quality, there is a special commitment to improve quality in rural areas, and among economically disadvantaged groups, handicapped children and linguistic minorities. Inservice education is one vehicle for retraining teachers to meet the changing demands made on school systems as a direct consequence of national development goals, technological advancements, and new societal values.

The Office of the National Primary Education Commission (ONPEC) has launched a number of initiatives designed to improve educational quality. This paper will focus on two exemplary inservice programs since 1980. Four questions associated with selected inservice innovations frame the discussions. These are:

1. What are the types of inservice activity since 1980?
2. What have their effects been in closing the gap between urban and rural student performance?
3. How does what we know about inservice programs in the U.S. help us to understand why some of these inservice programs were successful?
4. How does the Thai experience help other developing countries?

Conceptual Framework

In the discussion of key inservice innovations three

criteria will frame the information presented. These are (1) locus of control, (2) instructional delivery mode, and (3) use of a research base.

Locus of Control. There are social and political dynamics that interact to both enhance and inhibit the development and delivery of inservice education initiatives. School-Based Inservice Training (SBIT) Programs allow for varied teacher participation and tend to be more responsive to local needs than other forms of training (UNESCO, 1986a).

SBIT programs, which include clusters, allow for an unprecedented level of teacher involvement. These programs are based on the premises that:

- teachers have the ability to develop their personal and professional capabilities in the school and in the community; and
- teachers need to be involved in the identification and articulation of their own training needs (UNESCO, 1986a, p. i).

Central government controlled programs may also allow for local input and meaningful participation. Research (Runcharoen, 1987; Wheeler, et al., 1987) has established that strong united central government support was a minimum condition for the success of an educational innovation in Thailand.

When inservice programs with central government funding are implemented through a school-based delivery mode such as the cluster, they are made even stronger. Central government support coupled with local involvement and commitment represent an increased investment in program success.

When programs sponsored through central government agencies foster the adaptation of training based on local needs, school staffs are encouraged to develop a sense of ownership in the training process, thereby increasing their commitment to its success.

Instructional Delivery Mode. A wide range of instructional strategies have been used to achieve the inservice education goals in Thailand. Some of those strategies have been: self-instructional modules that foster active teacher involvement and accountability for learning; media-assisted strategies which include video-tapes, films, and transparencies; group strategies which include workshops, seminars, and small group sessions; creative strategies which include simulation, brainstorming, and role-playing; and, to a limited degree, discussion strategies

which include lectures and dialogues. ONPEC promotes the design and implementation of interactive inservice programs, thereby discouraging the use of lectures as a major instructional strategy.

Use of a Research Base. It is cost efficient to design inservice training programs that are specific to the needs of the trainees. However, the relevance of training is determined by the demands of central administration as well as by local school populations (Suwanketnikom, 1987a).

Primary efficiency data (1980) in Thailand, for instance, identified schools where student achievement in math and science was high and other schools where students' performance in science and math was very low. Research (NEC, 1987b) on effective school variables established that there was a correlation between student performance and factors such as teacher qualifications, school size, geographic location, family income, language, and other cultural elements.

Research data potentially inform program planners in ways that enhance the relevance and efficiency of all of the processes associated with training. These processes include identification of training foci, materials, strategies, implementation, and evaluation. Exploring the lessons from research in neighboring countries is another cost effective strategy in the movement toward improved educational quality in primary schools. The regional research catalogued by UNESCO that identified determinants of effective schools is a case in point.

Two Major Innovations Since 1980

The Improvement of Teaching Efficiency of the Primary School Teachers and The Principals' Inservice Program represent major attempts to upgrade the competence of teachers and principals in the primary schools of Thailand since 1980. On the table which follows, these major training innovations are presented in summary form. Three key considerations define the basis for the success of a particular inservice program. The questions related to these considerations follow:

1. Was there strong united support from the central government for the innovation that was implemented through a school-based organizational structure (i.e. clusters)?
2. Did the training program use a multisensory instructional approach that included self-instructional materials?
3. Was the design and implementation of training based on research data that included teachers' assessment of their needs?

Exemplary Inservice Programs		
	Teacher Efficiency	Principals' Inservice
Central Government Support/SBIT Delivery System	Yes	Yes
Multisensory Instruction System Including Self- Instructional Modules	Yes	Yes
Use of a Research Base Including Assessment of Teachers' Needs	Yes	Yes

The Improvement of Teacher Efficiency Project

This inservice project was designed as a direct response to an ONPEC commitment to improve teaching efficiency at the primary level. ONPEC studies demonstrated that teachers had not developed the skills required to use the 1978 curriculum effectively. Teacher ineffectiveness was linked to (1) inadequate knowledge of basic concepts, (2) poor teaching skills, and (3) negative attitudes toward teaching responsibility.

A major goal of the new curriculum was to foster a shift from teacher-centered to student-centered classrooms. Amornvivat (1986) said that the preservice and inservice teacher training programs prior to the implementation of the 1978 curriculum failed to prepare teachers in this regard.

The massive population of teachers to be retrained required the use of creative management and instructional strategies. The more traditional approaches to training simply were not adequate for such an undertaking.

Central Government Support and SBIT Delivery System. Data collected by ONPEC demonstrated the need for direct inservice teacher training to develop skills tied to the 1978 curriculum. In 1984, the Improvement of Teaching Efficiency of the Primary School Teachers was launched by ONPEC. Amornvivat (1986) of Chulalongkorn University served as director of the project. The

Project was financed from annual government budgets in 1985 and 1986 along with a loan from the World Bank to support the cost of self-instructional materials. Pilot testing of the training resources and processes was done before the mass-distance training began.

The Project was guided by two major commitments: (1) to provide the pedagogical and content training needed to implement the 1978 curriculum for a population of 338,528 primary school teachers, and (2) to provide the training between April and September of the 1986 fiscal year.

There were organized efforts to involve school staffs in each phase of the training process. Teachers were members of the training team. Working directly with the education expert, they helped develop the training resources. The teacher training was done at the cluster level, which gave teachers ongoing access to trainers.

Multisensory Instructional Materials. A package of self-instructional modules was the hub of the training resources produced for this inservice initiative. The resources were designed to foster teacher accountability for learning. Teachers were encouraged to function as independent learners assuming an active role in their professional development.

Training was divided into three segments: (1) teachers attended the initial three days of intensive training at which time the self-instructional texts -- the content basis of training -- were distributed; (2) returning to their respective school sites, they practiced using newly learned content and instructional methods and logged-in the results over a 4-week period; and (3) teachers, having experimented with skills developed during the first phase, returned for a second round of formal training (which lasted two days) where they shared the results of their experimentation with other teachers.

The self-instructional resources (programmed texts) were based on 20 major concepts in teaching methods for use in primary schools (ONPEC, 1987a). The 20 competencies fall into these five categories: (a) promotion of teachers' moral education; (b) improvement of teaching/learning quality and efficiency; (c) use of varied teaching techniques and strategies; (d) remedial teaching techniques, testing, and evaluation, and (e) concepts and principles of the 1978 primary education curriculum. Attention was given to content presentation so that teachers would find the colorful displays, illustrations, and pictures reinforcing. Supplementary media included video-tapes, slide-tapes, and transparencies. Transparencies were generally

used to display instructional summaries.

Workshop leaders served primarily as learning facilitators rather than as instructors in the traditional sense. They orchestrated the training process by guiding activities, managing media presentations, and promoting productive interaction among program participants. Clearly, a part of the intent of the training was to foster the growth of more independent learning styles among teachers. Another intent was to raise the level of their enthusiasm for learning on the assumption that these values would then be passed on to their students.

The multisensory instructional approach demonstrated specific ways teachers could use varied teaching strategies in their own classrooms. The approach also accommodated the diversity of learning styles among teachers.

Finally, program planners focused on the learning climate as an important dimension of inservice education. They set out to establish supportive and warm training environments to encourage positive interaction among all of the people associated with the training. Another intent was to enhance teacher morale by engaging teachers more actively in the inservice process.

Use of a Research Base. A relatively large data sample was collected from teachers in 51 provinces to determine the essential content to be included in the syllabus to guide training efforts. One intent of the initial survey was to assess teacher competency in relation to the knowledge and skill requirements for the 1978 curriculum. Other specific activities associated with the research design were these: (1) a cadre of senior officials in ONPEC responded to the initial draft of the syllabus; (2) self-instructional programmed texts were developed around the 20 areas of training; (3) pilot testing of the programmed resources was done with samples of 1, 10, and 108 teachers; (4) adaptations in the resources were made based on pilot data; (5) training manuals for facilitators were developed; (6) using a multiplier model, 15 facilitators were trained at the national level. These 15 people subsequently trained facilitators at the provincial level, who in turn trained facilitators at the district level. District level facilitators trained teachers at the school cluster level.

Project Director, Dr. Sumon Amornvivat (1987) indicated that a large portion of the funding was invested in creating the training design and producing instructional media. It was viewed as cost efficient to make instructional materials available to teachers so that they would have those resources as guides and supplements to instruction beyond the organized training period. Formative and summative evaluation data provided the basis for recommendations to improve future undertakings of this magnitude.

Principals' Inservice

The Principal's Inservice Program, launched in 1985, was the companion program to The Improvement of Teaching Efficiency of the Primary School Teachers Project. Education expert Dr. Teera Runchaoren (1987) said the results of a national survey confirmed that more than 90% of the 30,000 primary school principals had had no formal training for their jobs as principals. The Principals' Inservice Program was designed to give principals opportunities to upgrade their skills.

A basic premise of the Program was that principals must have clear ideas regarding their roles if they are to function effectively as school administrators. Therefore a major goal of training was to define and clarify the essential functions of principals.

Central Government Support and SBIT Delivery System. The Project was sponsored jointly by the World Bank and ONPEC, the government agency that assumes major responsibility for the management and support of primary schools. Agency officials recognized that successful implementation of the 1978 curriculum required that principals demonstrate key administrative skills and instructional leadership capacities. The training for principals, administered in numerous sessions over the course of a year, was a significant indication of ONPEC's commitment to improved primary school education.

Though the initial training for facilitators was done at the national level, subsequent training activities were done at the provincial and district levels. Facilitators managed the training of principals at the district level. The program enjoyed strong central government support and created opportunities for meaningful participation at the local level.

Multisensory Instructional Materials. The training program was based on a systems model. The entire training process centered around six basic competency areas that broadly defined the roles of principals. These were: academics, personnel, student affairs, business and budget, buildings and surroundings, and community relations.

A multimedia training package was used to provide the instructional content. The six areas of training were explored through 20 self-instructional modules supplemented by audio-visual resources such as video-tapes, slide-tapes, transparencies, and simulation games.

On a scheduled basis, principals came together at the

district level for interactive sharing of the instructional modules they had read (Runcharoen, 1987). The exchange allowed principals to apply what they had learned and to gain added insights as they listened to the experiences of others. A variety of instructional activities and media characterized the training sessions. The year-long training culminated with a post-assessment.

Use of a Research Base. The training design was based on a survey of principals' qualifications. The results established that only 10% of the principals in primary schools had been formally trained for their administrative roles.

During training formal pre- and post-assessments were used to measure principals' competency in relation to the six basic roles of principals. A final assessment was done at the end of the year-long training process, to ascertain measures of changed administrative behavior. The following were assessed: (1) teacher morale, (2) student achievement, and (3) school performance based on the perceptions of community leaders. Principals who scored in the designated range on the post-assessment were presented with a certificate of achievement (Runcharoen, 1987).

In the evaluation of principals' performance, weights were assigned to each of the six key areas, with the greatest weight assigned to academic affairs at 35 percent, student activities at 20 percent, and personnel at 20 percent. These three areas constitute 75 percent, which clearly established that the bulk of administrative time should be invested in these priority areas.

In an effort to maintain the competencies gained, District Supervisors monitored activities and provided support for principals through school visits. Runcharoen (1987) reported that historically, in Thailand, one-time training sessions have not produced the kinds of long-term behavior changes that they sought. Hence, the follow-up school visits.

Of the 30,000 principals engaged in the inservice training, some 2,000 elected to leave their administrative posts, through retirement (Wheeler, et al., 1989). For other principals who did not complete the training successfully, a program of remediation was designed to offer additional instruction. Having identified two exemplary programs and the elements that contributed to their success, we will look now at the effects of these innovations.

What Were the Effects of the Above Innovations?

The Teacher Efficiency Project. The attitudes of teachers toward inservice and inservice training content influence whether

or not they will honestly embrace the innovation. Pitayanuwat (1986) said that 95 percent of the teachers reported that they were satisfied with the training program and that they believed that it would enhance their classroom teaching performance.

Pitayanuwat's evaluation (1986), conducted a year after the initial training, confirmed that teachers' behavior had been markedly improved by the training. Twenty-five measures were used as indicators of changed teacher behavior. These measures included a variety of teaching strategies, instructional routines, and performance on the pre- and post-assessments. Data reported in another study (Wheeler, et al., 1989) report a correlation between improved student test scores and teacher engagement in the Teacher Efficiency Project.

The Principals' Inservice Training Program. The training for principals began in 1985. The first round of training ended in 1986.

Runcharoen (1987) reported improvement in student achievement in selected schools. He believed that the instructional leadership role of the principal accounted for 80 percent of the effects that influence student academic performance. Effective schools research in the U.S. (Sizemore, 1985; Lake, 1980; and Hilliard, 1988) has also established that the instructional leadership role of the principal is a major determinant of student academic success.

Other research (Wheeler, et al., 1989) reported the following regarding the efficacy of the principals' inservice training in Thailand:

A 1987 evaluation of provinces and districts found that over 60 percent of principals ranked "high" in terms of changed behavior as a result of the inservice training (ONPEC, 1987)...It was during this period of time that student achievement scores began to increase (p. 15).

Understanding the Basis for Success of Selected Innovations

Several conditions influence the success of inservice programs. Significant ones are: (1) mode of instruction, (2) locus of control, and (3) collaboration.

Use of Self-Instructional Materials. Of the factors contributing to the success of the above mentioned innovations, the use of self-instructional resources seemed paramount. In each of the innovations discussed above, the period of direct training was very brief -- as little as one day in some instances. Obviously teachers do not internalize a new

philosophy, new content, and master new teaching strategies in a matter of hours. The formal training sessions simply introduced teachers to a new instructional theory, a body of content, and a teaching methodology.

How then does a teacher move from square one (the training context) to the demonstration of new competencies? Joyce (1982) reported that teachers need to engage in repeated practice in order to refine a new model of teaching. His data showed that as many as 30 trials are necessary to master a new teaching model. The shift from teacher-centered to student-centered instruction in the 1978 curriculum required a change in the basic model for teaching. Attainment of this new set of behaviors required time, which is an essential condition for professional growth (Wildman and Niles, 1987).

Further, Joyce (1987) reported that a major investment in inservice was essential to successfully implement any educational innovation. In the Thai context, it appeared that the self-instructional materials compensated for the limited period of direct training. At the very outset of training, educators were encouraged to be accountable for their own learning. They were encouraged to read widely and to assume shared responsibility for contributing to the professional growth of their colleagues.

Attention must be given to providing training in formal and informal contexts. Internalizing the content associated with training takes more than a few hours in formal workshop settings, hence the value of self-instructional materials. Educators must have opportunities to read and to think, in order to absorb the content. Further, there must be numerous opportunities to practice the new strategies. Some of these opportunities must be created in supportive environments with colleagues who are engaged in similar learning experiences. Reducing the isolation associated with teaching also lowers educator anxiety as teachers strike out into new territories.

School-Based Inservice Programs. School-based programs create a level of local control. Wildman and Niles (1987) reported that autonomy is an essential condition for professional growth. Teachers have insights about their professional development needs that must be accommodated in every phase of the inservice process. Those training needs should form the basis of the training. The following statement is an indication of the value of teacher involvement:

Good problems, information-rich environments, and requisite cognitive skills are all crucial to professional growth, but without sufficient latitude for exploration and the independent testing of alternatives, one's growth opportu-

nities are severely limited. Increments of cognitive growth, positive self-concepts, and a feeling of power over one's learning are all expected outcomes when learners (students or teachers) exercise responsibility for their growth (Wildman and Niles, 1987, p. 6).

Basic in SBIT programs (UNESCO, 1986a) were the assumptions that teachers had the ability to develop their own professional growth experiences, and that they should be involved in identifying their training needs. The cluster system in Thailand responded to that need.

Collaboration. Wildman and Niles (1987) cited collaboration as another essential condition for professional growth. In the U.S., coaching is a growing trend to insure that educators have supportive school climates in which to share their successes and failures with concerned colleagues. The school cluster system (Kaewdaeng, 1985) in Thailand creates a support system and an opportunity for increased professional growth as principals and teachers engage in interactive sharing with colleagues. Reducing isolation during the acquisition of new teaching skills is also important for professional growth. Teaching, by its nature, is isolating. Sharing problems and offering mutual support at the school and cluster level reduce this occupational isolation. The following represent the advantages of collaboration:

1. Collegial work groups can expand teachers' levels of expertise by supplying a source of intellectual provocation and new ideas.
2. ...Collaboration breaks the grip of psychological isolation from other adults that characterizes the teacher's workplace and creates a forum for teachers to publicly test their models or ideas about teaching (cited in Wildman and Niles, 1987, p. 8).
3. Finally, a collaborative group can furnish the emotional support and encouragement teachers need to cope with the risk that is inherent in learning to teach well. Colleagues can demonstrate to one another that they value attempts at growth and reassure group members that the effort and pain are worth it (cited in Wildman and Niles, 1987, p. 8).

In summarizing the conditions that contributed to the success of particular inservice innovations, three seem to be paramount. These are (1) mode of instruction, (2) locus of

control, and (3) collaboration. The integration of these considerations with others that evolve through research, should have the net effect of continuously enhancing opportunities for educational improvement through increased teacher/administrator efficiency.

The Thai Experience: Lessons for Other Developing Nations

Lessons learned in Thailand can potentially inform the efforts of other developing nations. This section describes four basic lessons that might be considered by similar countries.

First, the use of a self-instructional delivery system seems to be a very efficient and cost-effective method for building teacher competency and productivity (Suwanketnikom, 1977b). Research has shown that teachers and administrators need repeated opportunities to practice in order to demonstrate mastery of new models of teaching. Self-instructional materials allow teachers and administrators repeated practice opportunities, outside of the structured training workshops. Thus, they may compensate for the brevity of training.

Second, the necessity for research has been demonstrated. Research data inform the entire training process. This ensures internal consistency between the training goals and the content of instruction, and facilitates summative and formative evaluation processes. Ideally, direct input from teachers and administrators should have some influence on the research design.

Third, teachers and administrators need training in the skills associated with an innovation prior to its implementation. Training includes instruction regarding the underlying philosophy, the content, and the instructional skills (i.e. planning, lesson development, presentation and evaluation) required for implementation.

Fourth, research on effective schools has demonstrated that the role of school principals has a direct effect on overall school climate. Principals must be good managers and strong instructional leaders. Far too often principals have not been sufficiently trained to carry out the requirements of instructional leadership. Therefore, innovative inservice programs must be designed to help school administrators, as well as teachers, develop necessary and appropriate skills to support classroom instruction.

Research findings in the Thai context suggest that there are lessons that have far-reaching ramifications for other developing countries. To summarize, it seems vital to support parallel training for administrators and teachers. Furthermore, it is crucial to minimize any negative effects caused by the brevity of organized training programs. Additionally, it seems very

important to base what we do in education on what we have learned from research. Finally, the investment in self-instructional training resources provides access to reference sources, and creates opportunities for independent and self-paced learning.

Teachers vary in terms of their commitment to teaching, in terms of their scholarship, and their preparation for teaching. Organized inservice programs can minimize the disparity in levels of teacher competency. As the gap narrows in the qualifications of teachers, the gap in educational quality should also narrow, leading to greater consistency in student performance in urban and rural settings.

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